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BULLETIN

OF THE

NORTH CAROLINA BOARD OF HEALTH.

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VOL. VI.

APRIL, 1891.

NO. 1.

Summary of Reports from County Superintendents of Health for March, 1891.

Alamance—Dr. G. W. Long, Graham. *La Grippe* exists in a very aggravated form, and measles has been prevalent in some sections. The sanitary condition of the jail is fair; that of the work-house fair; some of the houses at the poor-house are good, while others are not. Some of the inmates are physically and mentally unable, and others indisposed to keep clean; but things are about as good as the present appropriation will admit.

Alexander—Dr. J. B. Watts, Taylorsville. There has been an epidemic of *La Grippe*, complicated with pneumonia, all over the county. Staggers has been epidemic among horses. The sanitary condition of the county is very good, so far as I know; that of the public buildings is good, except as regards the court-house, part of which is used principally for a privy, hence sanitation is not very perfect there. There are no efforts being made to improve the condition of things.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. There has been a general epidemic of *La Grippe* attended with little fatality, complicated in a few cases with pneumonia. The fatal cases have been principally among young children and aged persons. The jail is in good sanitary condition. The court-house is in a bad condition, but the Commissioners have decided to have it repaired. Poor-house in good condition.

Ashe—No Board of Health.

Beaufort—Dr. W. A. Blount, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. Newton Robinson, Elizabethtown. The sanitary condition of the county is good. A few cases of measles and whooping-cough have occurred. The sanitary condition of the public buildings is first-class.

Brunswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. There have been reported thirty cases of measles, ten of whooping-cough, five of scarlatina, ten of diphtheria and three of typhoid fever. *La Grippe* still lingers in the county, with

more or less complications; but few deaths from it. There have been but three deaths from diphtheria and scarlet fever out of fifteen cases; from measles, two deaths. All the public buildings are in good condition, except the police department, which will be improved.

Burke—Dr. J. L. Laxton, Morganton. No report.

Cabarrus—Dr. R. S. Young, Concord. There have been reported twenty cases of measles, seven of whooping-cough and four of typhoid fever. The sanitary condition of the county is good; also that of the public buildings.

Caldwell—Dr. A. A. Kent, Lenoir. *La Grippe* has prevailed in all parts of the county, causing a number of cases of pneumonia and other serious sickness.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. We have had *La Grippe* in a mild form all over the county. The sanitary condition of the county is good. Our towns are improving in their sanitary condition, and our public buildings are kept clean and nice.

Caswell—Dr. R. H. Williamson, Yanceyville. Pneumonia and influenza have prevailed all over the county, and children have suffered from croup and bronchitis. The general sanitary condition of the county is as good as could be expected from the amount of rain-fall. The sanitary condition of the public buildings is good.

Catawba—Dr. J. M. McCorkle, Newton. Measles, mumps and whooping-cough have prevailed in some portions of the county. The sanitary condition of the county is good; also that of the public buildings.

Chatham—Dr. H. T. Chapin, Pittsboro. Four cases of scarlatina have been reported. *La Grippe* has prevailed in all parts of the county. The health of the county at present is good. Pneumonia has occurred, and some chicken-pox among the little folks. Our public buildings are in good condition and well kept.

Cherokee—Dr. J. F. Abernathy, Murphy. There have been several cases of *La Grippe*

and three cases of inflammatory rheumatism, with one death from the last named disease. The sanitary condition of the public buildings is good.

Chowan—Dr. R. H. Winborne, Barnitz. A few cases of diphtheria have been reported. There has been about the average prevalence of pneumonia in the county. The sanitary condition of the county is as good as I have ever known it for March—mostly diseases of the respiratory system. *La Grippe* has occurred in Edenton and in portions of the county on Albemarle Sound. The sanitary condition of the public buildings is good.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. Pneumonia and *La Grippe* have prevailed in many portions of the county. The sanitary condition of the county is good; also that of the public buildings.

Columbus—Dr. I. Jackson, Whiteville. The sanitary condition of the county is very good. Outside of a few cases of measles I hear of very little sickness in the county. The sanitary condition of the public buildings is good.

Craven—Dr. Leinster Duffy, New Berne. Measles and mumps have prevailed throughout the city and county. Diphtheria and scarlatina have occurred. *La Grippe*, and respiratory diseases generally, have been very prevalent. The death-rate, however, has been comparatively small. Public buildings are kept in pretty fair condition.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county is not very good on account of so much rain and mud. The sanitary condition of the public buildings is tolerably good.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Two cases of small-pox have occurred. These cases occurred in the practice of Drs. Payne & Son, and at first puzzled us somewhat as to diagnosis, but they were undoubtedly small-pox. The adult so afflicted died; the child, who had only a few pocks on her, is recovering, but is distinctly pitted. Early in the his-

tory our suspicions were aroused, and prompt isolation and vaccination of all those who were exposed to possible contagion were practiced with the most gratifying results. No spread of the disease is apprehended. I hear of measles in one section of the country. No change in the condition of the public buildings since my last report.

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. Measles and *La Grippe* have prevailed in some sections of the county. We have had a few cases of pneumonia, and bowel troubles have been quite severe. Scabies spread in some sections. The sanitary condition of the public buildings is good.

Durham—Dr. N. M. Johnson, Durham. The health of the county is fairly good; that of the poor-house and work-house is not as good as it should be, on account of poor buildings.

Edgecombe—Dr. Donald Williams, Tarboro. There have been reported seven cases of measles and ten or twelve of scarlatina. The latter has prevailed in the upper parts near the Halifax line. The jail is new and in good condition.

Forsyth—Dr. D. N. Dalton, Winston. Quite a number of cases of measles and whooping-cough and two cases of typhoid fever have been reported. The sanitary condition of the county is good. *La Grippe* has been quite prevalent, with some pneumonia. The sanitary condition of the public buildings is good.

Franklin—Dr. E. S. Foster, Louisburg. Measles is prevailing in this place and many other portions of the county. The health of the county, so far as I have been able to learn, was never better. With the above exception, there has been no sickness worth noting. The sanitary condition of the public buildings is good.

Gaston—Dr. E. B. Holland, Dallas. *La Grippe* and pneumonia have prevailed. The sanitary condition of the county and public buildings is good.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. J. M. Hays, Oxford. There have occurred about seventy-five cases of measles. *La Grippe* is still prevalent, but not

fatal. The sanitary condition of the county and public buildings is very good.

Greene—Dr. E. H. Sugg, Snow Hill. *La Grippe* has prevailed in the county, and there have been reported several cases of pneumonia and chicken-pox. The sanitary condition of the county and public buildings is good.

Guilford—Dr. E. R. Michaux, Greensboro. Distemper has been epidemic among horses and dogs. There has not been a great deal of sickness during the past month. The principal trouble has been pneumonia and bronchitis and some malaria. Several cases of *La Grippe* reported. Some of the pneumonia has been especially malignant and difficult to manage. The sanitary condition of the public buildings, other than the jail, is quite good. The jail would pass muster, but for the bad arrangement of the waste-pipes, or outlet to the excrement from the privies. However, we need a new jail. The "King's Daughters" are building a hospital in Greensboro, and we hope for great good from it.

Halifax—Dr. A. B. Pierce, Weldon. Report lost in the mails.

Harnett—No Board of Health.

Haywood—Dr. R. L. Allen, Waynesville. No report.

Henderson—Dr. W. B. Reese, Hendersonville. Pneumonia and measles have prevailed, with some rheumatism. We have had incessant rain. There have been reported two cases of rabies in dogs, with the inoculation of ten or twelve hogs from bites of the dogs. The sanitary condition of the public buildings is good.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. No report.

Jackson—Dr. J. M. Candler, Dillsboro. Measles has prevailed in the southern part of the county. The sanitary condition of the county is very good; entirely free from fevers. The sanitary condition of the public buildings is good.

Johnston—Dr. L. L. Sasser, Smithfield. Whooping-cough, measles and influenza have

prevailed. The sanitary condition of the county and public buildings is good.

Jones—Dr. C. B. Woodley, Trenton. Influenza, with pneumonia and bronchitis, have prevailed in all portions of the county. Dr. Ward also reports mumps and distemper. So far as as can be learned, the sanitary condition of the county is good; that of the public buildings is also good. The County Commissioners intend selling the poor-house property, which is in the woods, and buying a place nearer town and on the public road.

Lenoir—No Board of Health.

Lincoln—Dr. W. L. Crouse, Lincolnton. Whooping-cough and bronchial troubles have prevailed in some portions of the county. The sanitary condition of the county and public buildings is good.

Macon—Dr. J. M. Lyle, Franklin. *La Grippe* has prevailed in every portion of the county. The sanitary condition of the county and public buildings is good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. Coughs, colds, etc., have prevailed. We have had no serious sickness for the past month, though catarrhal affections of the respiratory tract have been prevalent. *La Grippe* has been general, though not serious. Poor-house and jail have recently been renovated and are in excellent condition.

McDowell—Dr. J. H. Gilkey, Marion. Catarrhal affections have prevailed in some portions. Other than these, there has been but little sickness. The general sanitary condition of the county and public buildings is good.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. *La Grippe* is still raging in all parts of the county. There have been reported three cases of whooping-cough and one of typhoid fever. The sanitary condition of the county is not good. There is considerable sickness all over the county. The jail is in as good condition as it is possible to keep one so small. The Commissioners are thinking of building a new one

in the near future. The poor-house is kept clean and healthful.

Montgomery—Dr. F. E. Asbury, Asbury. There have been reported about thirty cases of measles. Some parts of the county are in good sanitary condition, while others are not. The jail is not in very good condition, there being lack of ventilation. There is talk of a new one. The poor-house is in good condition.

Moore—Dr. Gilbert McLeod, Carthage. Measles has prevailed in different parts of the county. There has been a great deal of sickness during March, principally measles and influenza; a few cases of whooping-cough in the eastern parts. No new cases of meningitis since February. There has been a great deal of wet weather. Public buildings are in very good condition.

Nash—Dr. G. W. Lewis, Spring Hope. Measles has been prevalent, but in a mild form. The sanitary condition of the county is good—no sickness other than measles. Our county board are going to make some improvements in our jail, soon, in the way of more buildings. Jail is a good one and well kept.

New Hanover—Dr. F. W. Potter, Wilmington. Pneumonia has obtained in quite a number of cases of measles, especially among those who have recently come to the city (living in damp and open houses). *La Grippe* is prevalent, and in some cases of measles is pre-eminent above ordinary catarrhal symptoms. I have called the attention of our authorities to the unsanitary condition of the market-houses; also an open run, or ditch, in the rear of the "Racket Store." I have asked for a furnace for the cremation of garbage, but without avail. There have been reported twenty-eight cases of measles, two of diphtheria, three of typhoid fever, two of pernicious and two of hæmorrhagic malarial fever. There has been an epidemic of catarrhal troubles in horses. The jail is in good condition. Poor-house is in better order than usual; the inmates are required to take a full bath once a week, and to air their bedding often.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. J. L. Nicholson, Richlands. Many cases of measles and two of typhoid fever have occurred. General and widespread complaint comes from every section of the county, because of the severe epidemic of *La Grippe*. Mumps also prevalent. The jail remains in good condition; that of the poor-house yet very poor.

Orange—Dr. D. C. Parris, Hillsboro. Some cases of measles have occurred. Catarrhal diseases have prevailed in all portions of the county. Sanitary condition of the county quite good in spite of the great abundance of rain. Influenza, pneumonia, bronchitis and rheumatism have prevailed. Sanitary condition of public buildings fairly good.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. Five cases of typhoid fever have been reported. Measles and *La Grippe* have extensively prevailed as epidemics, and often combined with pneumonia. The warm weather has developed malaria, complicating the other diseases and rendering them more difficult to treat.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. *La Grippe* has prevailed throughout the county; many cases quite severe, but not many deaths from it. Measles and whooping-cough have traversed many sections of the county. Pneumonia, bronchitis and malaria have been reported, and some eczema; also a few cases of teething diarrhoea among children. Distemper among horses and cholera among hogs has been reported. Permission was granted by the last Legislature for the county authorities to sell the old poor-house and select a new site for a new building, but it has been decided to let it remain as it is.

Polk—Dr. H. D. Shankle, Mills' Spring. Mumps has prevailed in several parts of the county, and one case of typhoid fever has been reported. The sanitary condition of the county is some better than it was a month ago. We have had a great deal of pneumonia, *La Grippe*, mumps, etc., all caused by negligence and

exposure. There has been an epidemic of chicken cholera. There are no efforts being made to improve the condition of the public buildings, which should be in better condition than they are.

Randolph—Dr. J. W. Long, Randleman. *La Grippe*, catarrhal fevers, pneumonia and rheumatism have prevailed. Two cases of measles, "lots of whooping-cough," one case of diphtheria, and one each of typhoid fever, cholera infantum and hæmorrhagic malarial fever have occurred. Have received reports from Drs. Malone, Redding and Daligny. The sanitary condition of the public buildings is as good as can be with such buildings as they are. I met a committee from our grand jury in March, and went over with them the poor-house and all its interests, and they reported an urgent need for a new building and more room. What may come of it remains to be seen.

Richmond—Dr. J. M. Covington, Rockingham. Three cases of scarlatina have been reported. *La Grippe* and catarrhs have prevailed in all parts of the county. The sanitary condition of the county is good; that of the public buildings is not what it should be, and will never be until improved methods of sanitation are adopted. I have presented the case of our jail to the Commissioners several times, but, as yet, without any good results.

Robeson—Dr. R. F. Lewis Lumberton. The county is in fair sanitary condition. The public buildings are in good condition; improvements are contemplated.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. Many cases of measles and whooping-cough have occurred. *La Grippe*, and catarrhs generally, have prevailed in many portions of the county. The sanitary condition of the county is as reported at the time of the last report. The jail and poor-house are in good sanitary condition. Repairs are needed at the court-house, and alterations are needed in the jail.

Rutherford—Dr. W. A. Thompson, Cliffdale. *La Grippe* and pneumonia have prevailed in portions of the county. The sanitary

condition of the county is as good as you will find in most counties, but is far from good. The water-closets, and other buildings dangerous to public health, are often placed on a higher level than the water supply, with the result of the direct contamination of the water. The sanitary condition of the public buildings is as good as the arrangement of the buildings will admit.

Sampson—Dr. J. A. Stevens, Clinton. Influenza and measles are very prevalent. A few cases of pneumonia and many of bronchial affections. The sanitary condition of the poor-house is good; that of the jail is not as good as it should be.

Stanly—Dr. D. P. Whitley, Plyler. *La Grippe*, measles and whooping-cough have prevailed in various localities. There has been an epidemic of distemper among horses. Have had an abundance of catarrhal affections; some pneumonia. The sanitary condition of the public buildings is moderately good. There has been an improvement in the public school-houses recently. Our court-house is unsafe and unfit for use.

Stokes—Dr. W. V. McCauless, Danbury. Measles and pneumonia have prevailed in the middle portions. The sanitary condition of the county is good; that of the public buildings is fair.

Surry—No Board of Health.

Swain—Dr. R. L. Davis, Bryson City. Three cases of measles have been reported. The sanitary condition of the county is as good or better than it has been for several years. The public buildings are in about as good condition as they can be.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. We have had the worst weather for the past two months I ever saw; but still there is no sickness to report.

Union—Dr. W. C. Ramsay, Monroe. *La Grippe* and whooping-cough have prevailed in some portions of the county, otherwise the health of the county has been good. Poor-house in good and jail in bad sanitary condition.

Vance—Dr. A. Cheatham, Henderson. Ten cases of measles and five of whooping-cough reported. There has been some distemper among horses. The sanitary condition of the county is good. The jail has been improved, and it appears improved.

Wake—Dr. James McKee, Raleigh. There have been reported thirty-two cases of measles, one of scarlatina and three of mumps. Measles, though now abating, has prevailed in an epidemic form, but not at all fatal. Public buildings are in admirable sanitary condition. Private residences are being rapidly connected with our sewer system, and thus a vast improvement of the city is noticeable. The sanitary condition of the city and county is as good as circumstances will admit. Continued rains, overflowing streams and very muddy streets and roads render work of all kinds impracticable.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. No report.

Wayne—Dr. Wm. H. Cobb, acting, Goldsboro. Measles, chicken-pox, *La Grippe* and pneumonia have prevailed. Sanitary condition of the public buildings is good.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. There have been reported thirty-eight cases of measles, four cases of whooping-cough. Pneumonia and *La Grippe* have been the prevailing diseases. One physician reports some cases of dysentery. The sanitary condition of the public buildings is good.

Yadkin—Dr. T. R. Harding, Yadkinville. Measles, whooping-cough and typhoid fever have occurred. The first two, with mumps, have prevailed in nearly all portions of the county. There has been an epidemic of chicken cholera. Pneumonia, rheumatism and bronchial troubles have been common. The death-rate has been very low. The sanitary condition of the public buildings is bad, with no efforts to improve the jail. The poor-house will be removed this summer.

Yancey—Dr. J. L. Ray, Burnsville. *La Grippe* has prevailed in nearly all portions of the county. There has been a slight epidemic of distemper among horses. The health of the county is about as usual. The jail is not kept very clean, and needs covering. A new poor-house is being built, and will be finished soon.

Summary of Mortuary Statistics for March, 1891.

(FIFTEEN TOWNS.)

	White.	Col'd.	Total.
Aggregate population.	56,814	46,312	103,126
Aggregate deaths.....	61	90	151
Temporary annual death- rate per 1,000.....	12.9	23.3	15.6
Deaths under 5 years old,			52
<i>Causes of death.</i>			
Typhoid fever	0	2	2
Scarlet fever	0	1	1
Malarial fever	1	1	2
Diphtheria	0	1	1
Whooping-cough	0	1	1
Measles	2	1	3
Pneumonia	7	9	16
Consumption.....	9	18	27
Brain diseases.....	0	1	1
Heart diseases.....	2	2	4
Neurotic diseases	2	0	2
Diarrhoeal diseases...	5	4	9
All other diseases....	14	28	42
Accident and violence	1	3	4
Suicide.....	1	1	2
Still-born.....	6	6	12
	50	79	129
Raleigh, unclassified.	11	11	22
Total.....	61	90	151

Review of Diseases for March, 1891

Bronchitis—Reported from Caswell, Guilford, Jones, Lincoln, Orange, Pitt and Sampson—7 counties.

Chicken-pox—From Chatham, Greene and Wayne—3 counties.

Cholera (chickens)—From Polk and Yadkin—2 counties.

Cholera (hogs)—From Pitt.

Cholera Infantum—From Randolph.

Croup—From Caswell.

Diarrhœa—From Pitt.

Diphtheria—From Buncombe, Chowan, Craven, New Hanover and Randolph—5 counties.

Distemper—From Guilford, Jones, New Hanover, Pitt, Stanly, Vance and Yancey—7 counties.

Dysentery—From Wilson.

Eczema—From Pitt.

La Grippe—From Alamance, Alexander, Anson, Buncombe, Caldwell, Carteret, Caswell, Chatham, Cherokee, Chowan, Cleveland, Craven, Duplin, Forsyth, Gaston, Granville, Greene, Guilford, Johnston, Jones, Macon, Martin, Mitchell, Moore, New Hanover, Onslow, Orange, Pender, Pitt, Polk, Randolph, Richmond, Rowan, Rutherford, Sampson, Stanly, Union, Wayne, Wilson and Yancey—40 counties.

Malarial Fever—From Pender and Pitt—2 counties.

Malarial Fever (Hæmorrhagic)—From New Hanover and Randolph—2 counties.

Malarial Fever (pernicious)—From New Hanover.

Measles—From Alamance, Bladen, Buncombe, Cabarrus, Catawba, Columbus, Craven, Davidson, Duplin, Edgecombe, Forsyth, Franklin, Granville, Henderson, Jackson, Montgomery, Moore, Nash, New Hanover, Onslow, Orange, Pender, Pitt, Randolph, Rowan, Sampson, Stanly, Stokes, Swain, Vance, Wake, Wayne, Wilson and Yadkin—34 counties.

Mumps—From Catawba, Craven, Jones, Onslow, Polk, Wake and Yadkin—7 counties.

Pneumonia—From Alexander, Caldwell, Caswell, Chatham, Chowan, Cleveland, Duplin, Forsyth, Gaston, Greene, Guilford, Henderson, Jones, New Hanover, Orange, Pender, Pitt, Polk, Randolph, Rutherford, Sampson, Stanly, Stokes, Wayne, Wilson and Yadkin—26 counties.

Rabies—From Henderson.

Rheumatism—From Cherokee, Orange, Randolph and Yadkin—4 counties.

Scabies—From Duplin.

Scarlatina—From Buncombe, Chatham, Craven, Edgecombe, Richmond and Wake—6 counties.

Small-pox—From Davidson.

Staggers—From Alexander and Anson—2 counties.

Typhoid Fever—From Buncombe, Cabarrus, Forsyth, Mitchell, New Hanover, Onslow, Pender, Polk, Randolph and Yadkin—10 counties.

Whooping-Cough—From Bladen, Buncombe, Cabarrus, Catawba, Forsyth, Johnston, Lincoln, Mitchell, Moore, Pitt, Randolph, Rowan, Stanly, Union, Vance, Wilson and Yadkin—17 counties.

Condition of Jails and Poor-houses by Counties for March, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	9a	500			35	800		
Alexander.....	1	500	0		13	550	0	3
Alleghany.....								
Anson.....	4				9			
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....	0				6			
Brunswick.....								
Buncombe.....	20	800	5		25	700	10	
Burke.....								
Cabarrus.....	9	921			18	*		
Caldwell.....	2		2	1	8		2	2
Camden.....								
Carteret.....	0				0			
Caswell.....	2	550			24	1,000	9	3
Catawba.....	5	600	1	3	28	775	9	10
Chatham.....	4				28			
Cherokee.....	1	*			2	*		
Chowan.....	4				6			
Clay.....								
Cleveland.....	11	684		5	26	997		6
Columbus.....	2	*			13	*		
Craven.....	11				16			
Cumberland.....	1				16			
Currituck.....								
Dare.....								
Davidson.....	1	1,000	0	0	23	720	0	2
Davie.....								
Duplin.....	0				16	*		
Durham.....	2	1,000		1	31b	1,000		6
Edgecombe.....	2	*	1	0	22	*	5	
Forsyth.....	22	900	8	6	29		4	3

a. Includes 9 in house of correction. * Space exceeds 1,000 cubic feet.

b. Includes 14 in house of correction.

Condition of Jails and Poor-houses by Counties for March, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	4			2	20			2
Gaston.....	6		3		14			
Gates.....								
Graham.....								
Granville.....	4	*			22	812		
Greene.....	1	500		1	9	1,000		1
Guilford.....	8	*			30	*		
Halifax.....								
Harnett.....								
Haywood.....								
Henderson.....	5		2	2	4		0	1
Hertford.....								
Hyde.....								
Iredell.....								
Jackson.....	1	200	1	1	4	200	1	2
Johnston.....	2	*	2	2	15	1,000	4	5
Jones.....					4	*		
Lenoir.....								
Lincoln.....	11	700			22	500		
McDowell.....	3	600	1	1	5	550	0	0
Macon.....	2	*	1	1				
Madison.....								
Martin.....	2	1,000		1	15	500	2	4
Mecklenburg.....								
Mitchell.....	7				6			
Montgomery.....	6		5	3	13		5	10
Moore.....	5	*	0	3	10	850	0	3
Nash.....	3	*	1	2	35	800	5	4
New Hanover.....	21	600	11	12	24a	*	18	13
Northampton.....								
Onslow.....	5	1,000		2	4	*	1	1
Orange.....	1	512		1	30	*	14	13
Pamlico.....								

a. Includes 3 in house of correction.

Condition of Jails and Poor-houses by Counties for March, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	0				3		1	0
Perquimans.....								
Person.....								
Pitt.....								
Polk.....	2	*		2	4	800		
Randolph.....	12	560	4	5	38	425	10	11
Richmond.....	3				6			
Robeson.....	7	946			9	800		
Rockingham.....								
Rowan.....	11	680	1	4		*	3	0
Rutherford.....	6	*			25	750		
Sampson.....	2				19			
Stanly.....	1	*	0	1	13	800	0	1
Stokes.....	2	600	1	0	11	600	3	4
Surry.....								
Swain.....	1							
Transylvania.....								
Tyrrell.....								
Union.....	2	*			15	*		2
Vance.....	7	*	4	3	16	*	3	3
Wake.....	2	*			110a			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	8				8			
Wilkes.....								
Wilson.....	3	*	1	1	19	*	7	5
Yadkin.....	2		0	1	27		0	7
Yancey.....	3	*	1	1				

a. Includes 58 in house of correction.

Meteorological Report for March, 1891.

STATIONS.	TEMPERATURE.										NO. DAYS.						
	Mean monthly.	Highest.	Date.	Lowest.	Date.	Range.	Mean daily range.	Greatest daily range.	Date.	Least daily range.	Date.	Clear.	Fair.	Cloudy.	On which rain fell, including hail, snow and sleet.	Total rainfall, including hail, snow and sleet (in inches).	Prevailing wind.
Chapel Hill.....																	
Chat'oga, Tenn.	48.0	69.0	24	24.0	15	45.0	.....	33.0	17	4.0	9	6	11	14	21	9.16	S.
Charleston, S. C.	55.0	74.0	8	34.0	15	40.0	.....	58.0	6	6.0	16	5	6	20	12	5.47	N. E.
Charlotte.....	45.8	70.0	23	23.0	15	47.0	.....	29.0	29	4.0	6	8	6	17	17	11.13	N.W.
Columbia, S. C.	46.0	69.0	31	26.0	15	43.0	.....	27.0	3	3.0	26	10	5	16	13	6.99	N.W.
Hatteras																	
Kitty Hawk.....																	
Knoxv'le, Tenn	46.0	71.0	25	21.0	15	50.0	.....	31.0	17	5.0	13	5	10	16	19	7.87	N. E.
Lynchburg, Va.	40.6	64.0	23	19.0	15	45.0	.....	34.0	18	4.0	20	5	9	17	16	7.44	E.
Norfolk, Va.....	43.6	74.0	9	23.0	15	51.0	.....	34.0	16	3.0	6	11	3	17	18	8.09	N.W.
Raleigh.....	45.2	72.0	9	22.0	15	50.0	15.0	32.0	18	3.0	6	5	5	21	18	7.25	N.
Southport.....	52.1	69.0	24	28.8	15	40.2	.....	23.5	2	5.0	26	5	11	15	12	4.83	N. E. W.
Wake Forest.....																	
Wilmington	52.0	72.0	8	30.0	15	42.0	.....	28.0	18	8.0	(a)	3	13	15	12	5.15	N. E.

Barometer.

STATIONS.	MEAN.	HIGHEST.	DATE.	LOWEST.	DATE.	RANGE.
Chapel Hill, N. C.....						
Chattanooga, Tenn	30.068	30.526	15	29.677	21	.849
Charleston, S. C.	30.051	30.505	15	29.628	21	.877
Charlotte, N. C.	30.070	30.559	15	29.620	21	.930
Columbia, S. C.						
Hatteras, N. C						
Kitty Hawk, N. C.....						
Knoxville, Tenn	30.070	30.550	15	29.670	21	.880
Lynchburg, Va	30.120	30.596	15	29.575	22	1.021
Norfolk, Va	30.074	30.558	15	29.385	22	1.173
Raleigh, N. C	30.090	30.581	15	29.593	22	.988
Southport, N. C.						
Wake Forest, N. C						
Wilmington, N. C	30.070	30.560	15	29.520	21	1.040

(a.) 1st, 6th and 7th.

Mortuary Report for March, 1891.

TOWNS AND REPORTERS.	Races.	Population.		Temporary Annual death Rate per 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Phanatical Diseases.	All other diseases.	Accident & Violence.	Suicide.	Still-born.	Total	
		By Races	Total.	By Races	Total.																	By Races.	By Towns.	Deaths Deaths under 5 yrs.
Asheville.....	White	7,000	10,000	12.9	15.6	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	7	13
Dr. H. B. Weaver.....	Color'd	3,000	...	24.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	9
Charlotte.....	White	7,000	13,000	24.0	31.4	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	14	34
Dr. J. Scarr.....	Color'd	6,000	...	40.0	...	1	...	...	1	...	4	...	1	...	...	...	...	...	...	...	20	12
Durham.....	White	4,000	7,000	9.0	10.3	...	1	...	...	...	2	...	...	...	...	...	...	1	...	...	3	6
Dr. N. M. Johnson.....	Color'd	3,000	...	12.0	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3	2
Fayetteville.....	White	2,800	5,000	8.6	14.4	...	...	...	...	...	2	...	...	...	...	...	1	1	...	...	2	6
Dr. J. H. Marsh.....	Color'd	2,200	...	21.8	...	...	...	...	...	...	2	...	1	...	...	...	...	1	...	...	4	1
Goldsboro.....	White	2,500	5,000	0.0	7.2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	0	3
Dr. W. H. Cobb, Jr. ...	Color'd	2,500	...	14.4	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	3	1
Henderson.....	White	2,250	4,250	0.0	14.1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	0	5
Dr. A. Cheatham.....	Color'd	2,000	...	30.0	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...
Newbern.....	White	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
S. Fulcher, City Cl'k.	Color'd	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oxford.....	White	1,600	3,300	15.0	18.2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	5
Dr. J. M. Hays.....	Color'd	1,700	...	21.2	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	3	...
Raleigh.....	White	8,000	15,000	16.5	17.6	...	...	...	...	...	...	...	...	...	...	...	...	11	...	...	11	22
Dr. Jas. McKee.....	Color'd	7,000	...	18.9	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...	...	11	8
Salisbury.....	White	2,800	4,200	25.7	25.7	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	6
Dr. J. J. Summer II. ...	Color'd	1,400	...	25.7	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	3	9
Tarboro.....	White	1,258	2,370	9.5	5.1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1
Dr. D. Williams.....	Color'd	1,112	...	0.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	1
Warrenton.....	White	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dr. P. J. Macon.....	Color'd	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wilmington.....	White	9,000	21,000	13.3	20.9	...	1	...	...	...	2	2	...	2	2	...	...	...	...	...	1	10
Dr. F. W. Potter.....	Color'd	12,000	...	26.0	...	1	1	1	...	...	4	3	...	1	3	...	...	8	...	...	4	36
Greensboro.....	White	4,000	6,000	9.0	8.0	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	3	4
Dr. E. R. Michaux.....	Color'd	2,000	...	6.0	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...
Statesville.....	White	2,000	2,500	6.0	4.8	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1
Dr. M. W. Hill.....	Color'd	500	...	0.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	...
Wilson.....	White	2,000	3,500	0.0	3.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	1
Dr. A. Anderson.....	Color'd	1,500	...	8.0	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Hillsboro.....	White	600	1,000	24.0	60.0	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	5
Dr. D. C. Parris.....	Color'd	400	...	12.0	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	4	...
Monroe.....	White	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dr. W. C. Ramsay.....	Color'd	
Salem—S. W. Ch- nard, City Clerk.....	White	
	Color'd	

BULLETIN

OF THE

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VOL. VI.

MAY, 1891.

NO. 2.

State Care of the Insane.

A public meeting, under the auspices of State Charities Aid Association (New York), is to be held on May 1st, at Chickering Hall, to commemorate the removal of over 2,000 insane persons from the poor-houses of the State, and the completion of legislation in their behalf, whereby, after a contest of four years duration, the poor-house system of caring for the insane has been abolished, and the State assumes henceforth the entire charge and maintenance of her dependent insane. The support of the community is also to be asked for other reforms undertaken by the Association, and among the speakers will be Ex-President Grover Cleveland, Bishop Henry C. Potter and Joseph H. Choate, Esq.

In future, the Meteorological Reports will be prepared by the Agricultural Experiment Station. Through the kindness of Dr. H. B. Battle, Director, the Agricultural Experiment Station has volunteered to furnish these reports each month, and as the number of Stations reporting will be increased about fifty per cent., and the proof of the tables revised by the

Agricultural Experiment Station, this part of THE BULLETIN will be much more valuable than heretofore. This Board acknowledges the courtesy of the Experiment Station with thanks.

AN EPIDEMIC OF "SMALL PARKS" is invited for the city of Boston, as we learn from the *Boston Medical and Surgical Journal*, which says: "A committee of the Boston City Government gave a hearing last week on the petition of Robert Provan, M. D., and others, that the city set apart a few open spaces in the tenement districts, from half an acre to two acres in size, which would furnish spaces for recreation and sports."

Review of Diseases for April, 1891.

Bronchitis—Reported from Jones, Pitt, Rowan, Sampson and Stanly—5 counties.

Chicken Cholera—From Wilson.

Chicken-Pox—From Greene and Warren—2 counties.

Diarrhæa—From Columbus, Edgecombe, Rowan, Stanly and Union—5 counties.

Diphtheria—From Cherokee, Randolph, Stokes and Wake—4 counties.

Distemper—From Mitchell, Pitt, Stanly and Vance—4 counties.

Dysentery—From Alamance, Greene, Moore, Onslow, Randolph and Wilson—6 counties.

Hog Cholera—From Pitt, Randolph, Robeson and Wilson—4 counties.

Hydrophobia (in domestic animals)—From Sampson.

Influenza (La Grippe)—From Alamance, Caldwell, Caswell, Chatham, Cleveland, Cumberland, Gaston, Guilford, Halifax, Jones, McDowell, Mitchell, New Hanover, Onslow, Pitt, Rowan, Sampson, Stokes, Union and Wilson—20 counties.

Malarial Fever—From Cumberland, Greene, Guilford, New Hanover, Sampson and Stanly—6 counties.

Malarial Fever, pernicious—From Franklin, Greene, Pitt and Stanly—4 counties.

Measles—From Cabarrus, Cherokee, Davidson, Durham, Edgecombe, Franklin, Gaston, Guilford, Iredell, Jackson, Johnston, Lincoln, Moore, Nash, New Hanover, Onslow, Orange, Randolph, Robeson, Rowan, Sampson, Stanly, Stokes, Union, Wake, Warren, Watauga, Wilson and Yancey—29 counties.

Mumps—From Jones, Onslow, Tyrrell, Wake and Yancey—5 counties.

Pink-Eye (horses)—From Randolph.

Pneumonia—From Caldwell, Caswell, Cumberland, Guilford, Jackson, Jones, Nash, Pitt, Randolph, Rowan, Sampson, Swain, and Wilson—13 counties.

Rheumatism—From Caswell, Orange, Pitt and Randolph—4 counties.

Roseola—From Halifax.

Scarlatina—From Richmond and Wake—2 counties.

Sciatica—From Orange.

Staggers (horses)—From Randolph.

Tonsillitis—From Halifax.

Typhoid Fever—From Columbus, New Hanover, Northampton, Randolph, Rowan, Stanly and Tyrrell—7 counties.

Varioloid—From Bertie (this county has no Board of Health, and this case was reported by the Superintendent of Northampton).

Whooping-Cough—From Cabarrus, Cleveland, Johnston, Lincoln, Moore, New Hanover, Northampton, Randolph, Rowan, Sampson, Stanly, Union, Watauga and Yancey—14 counties.

Summary of Mortuary Statistics for April, 1891.

(THIRTEEN TOWNS.)

	White.	Col'd.	Total.
Aggregate population.	44,014	38,112	83,126
Aggregate deaths.....	33	64	96
Temporary annual death-rate per 1,000.....	9.0	18.8	15.0
Deaths under 5 years old,			19
<i>Causes of death.</i>			
Typhoid fever	0	1	1
Malarial fever	0	1	1
Measles	0	1	1
Pneumonia	6	4	10
Consumption	4	11	15
Brain diseases.....	0	1	1
Heart diseases.....	3	4	7
Diarrhoeal diseases...	0	1	1
All other diseases....	8	18	26
Accident and violence	0	4	4
Still-born.....	3	5	8
	24	51	75
Raleigh, unclassified.	9	12	21
Total.....	33	63	96

Summary of Reports from County Superintendents of Health for April, 1891.

Alamance—Dr. G. W. Long, Graham. Influenza has been the prevailing disease, but it is subsiding rapidly. Dysentery has also been prevalent to a limited extent. The sanitary condition of the county is fair.

Alexander—Dr. J. B. Watts, Taylorsville. There has been no epidemic of any importance during the month. The general sanitary condition of the county is good; that of the pub-

lic buildings is about as last reported, and there are no efforts at improving it.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Beaufort.—Dr. W. A. Blount, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. No report.

Cabarrus—Dr. R. S. Young, Concord. An epidemic of whooping-cough has prevailed throughout the whole county, and there have been eight cases of measles reported. The sanitary condition of the county and public buildings is good.

Caldwell—Dr. A. A. Kent, Lenoir. *La Grippe* has prevailed in all parts of the county. *La Grippe* prevailed during the first half of the month, causing some pneumonia and other sickness of a serious nature. The last half of the month was unusually healthy. The sanitary condition of the public buildings about the same.

Camden—No Board of Health.

Caswell—Dr. R. H. Williamson, Yanceyville. Pneumonia, remittent fever, rheumatism and influenza have prevailed in all portions of the county. The sanitary condition of the county is good, as also that of the public buildings. The jail has been nicely washed inside since the last report.

Catawba—Dr. J. M. McCorkle, Newton. No report.

Chatham—Dr. H. T. Chapin, Pittsboro. *La Grippe* has prevailed in all portions of the county. The general sanitary condition of the county is good. Poor-house and jail are in good condition.

Cherokee—Dr. J. F. Abernathy, Murphy. There have been reported eleven cases of measles and one of diphtheria. There has been but one death in our county during the last month. The foundation for the new court-

house is being laid. The jail is in bad condition, but there are no inmates at present.

Chowan—Dr. R. H. Winborne, Barnitz. No report.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. *La Grippe* has prevailed in some parts of the county, and there has been some whooping-cough. The sanitary condition of the county and public buildings is good.

Columbus—Dr. Isaac Jackson, Whiteville. The sanitary condition of the county is very good. There have been reported two cases of typhoid fever and a few of diarrhoea. The sanitary condition of public buildings is good.

Craven—Dr. Leinster Duffy, New Berne. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. *La Grippe*, pneumonia, catarrhal and malarial fevers have prevailed during the month, with a few cases of bowel troubles. The sanitary condition of the county is good; also that of the public buildings.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Lexington. Measles has prevailed. The sanitary condition of the county is very good; that of the public buildings unchanged.

Duplin—Dr. J. W. Blount, Kenansville. There is little or no sickness in the county. The sanitary condition of the poor-house is good.

Durham—Dr. N. M. Johnson, Durham. Measles has prevailed in this town. The sanitary condition of the county and public buildings is good.

Edgecombe—Dr. Donald Williams, Tarboro. Measles has prevailed in all parts of the county. With this exception, and a little diarrhoea, the sanitary condition of the county is good. That of the public buildings is good.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. Measles of a mild type has prevailed in several portions of the county. There has been reported two cases of pernicious malarial fever. The sanitary condition of the county and public buildings is very good.

Gaston—Dr. E. B. Holland, Dallas. Measles has prevailed in some parts of the county. A few cases of *La Grippe* of a mild form also exist. The sanitary condition of the public buildings is first-rate.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. J. M. Hays, Oxford. The sanitary condition of the county is good. A substantial work-house is in course of construction, and the court-house will be rebuilt soon.

Greene—Dr. E. H. Sugg, Snow Hill. Malarial fevers and dysentery have prevailed in the county. There have also been reported two cases of chicken-pox and one of pernicious malarial fever. The sanitary condition of the county and public buildings is good.

Guilford—Dr. E. R. Michaux, Greensboro. The health of the county has been very good, considering everything. We have had quite a number of cases of measles and pneumonia and some malarial troubles. *La Grippe* reported from the southern portion of the county. Sanitary condition of the public buildings very fair; some improvements needed in the jail, but nothing as yet has been done.

Halifax—Dr. A. B. Pierce, Weldon. Roseola and tonsilitis have prevailed in some portions of the county. The health of the county has been very good; influenza has prevailed to a considerable extent—a few cases have been violent. Public buildings are in good condition.

Harnett—No Board of Health.

Haywood—Dr. R. L. Allen, Waynesville. No report.

Henderson—Dr. W. B. Reese, Henderson. No report.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. There have been reported twelve cases of measles. There has been no sickness of any consequence in April, the sanitary condition of the county being fine. There is no change in the sanitary condition of the jail or poor-house since the last report. The construction of the jail is such that it cannot be improved easily.

Jackson—Dr. J. M. Candler, Dillsboro. Six cases of measles have been reported, also four cases of pneumonia. The sanitary condition of the county and public buildings is good.

Johnston—Dr. L. L. Sasser, Smithfield. Measles, whooping-cough and bowel troubles have prevailed in these sections. The sanitary condition of the county and public buildings is good.

Jones—Dr. C. B. Woodley, Trenton. Influenza has prevailed in nearly all portions of the county. There has occurred some pneumonia and bronchitis. The sanitary condition of the county and public buildings is good. Mumps has also been reported.

Lenoir—No Board of Health.

Lincoln—Dr. W. L. Crouse, Lincolnton. Whooping-cough and measles have prevailed to some extent. There have occurred no other diseases that are dangerous to health. The sanitary condition of the county is good.

McDowell—Dr. J. H. Gilkey, Marion. Catarrhal affections have prevailed in some portions of the county. We have had a few cases of the prevailing epidemic, but, with this exception, the health and sanitary condition of the county have been unusually good; that also of public buildings.

Macon—Dr. J. M. Lyle, Franklin. No report.

Madison—No Superintendent of Health.

Martin—Dr. W. H. Harrell, Williamston. No report.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. Influenza has prevailed, and there has been an epidemic of distemper among horses. The sanitary condition of the county is good, there being now less sickness than I have known for the past ten years. I have just made a visit to the poor-house, and found it and the inmates properly kept, though there was some sickness among the inmates. Other public buildings are in fair sanitary condition.

Montgomery—Dr. F. E. Asbury, Asbury. The county is in a healthy condition, there being but very little sickness of any kind. I

cannot get the doctors of the county to report to me as they ought. The jail is in bad condition; the other public buildings tolerably good.

Moore—Dr. Gilbert McLeod, Carthage. Measles and whooping cough have prevailed in every part of the county. The sanitary condition of the county is very good at present. There have been ten or twelve deaths from measles and whooping-cough, and two or three from dysentery, but only a few cases of the last have been reported yet. The sanitary condition of the public buildings is now good.

Nash—Dr. G. W. Lewis, Spring Hope. Measles has prevailed in various sections of the county. The sanitary condition of the county is good. With the exception of measles and a few cases of pneumonia we have had no sickness during April. Our public buildings are in good sanitary condition.

New Hanover—Dr. F. W. Potter, Wilmington. About forty-five cases of measles, one of whooping-cough and one of typhoid fever have been reported. The sanitary condition of the county is moderately good, with the exception of the prevailing epidemic of *La Grippe*. The sanitary condition of the public buildings is good. There are some venereal diseases and malarial troubles in the jail.

Northampton—Dr. H. W. Lewis, Jackson. About twenty cases of whooping-cough and two of typhoid fever have been reported. The sanitary condition of the county is good. A contract has been given for an \$8,000 jail, to be built on modern ideas of sanitation. A case of varioloid occurred in Bertie, about eighteen miles from Roxobel. I suppose it has been reported.

Onslow—Dr. J. L. Nicholson, Richlands. During the first half of the month *La Grippe* was quite prevalent over the county. Measles reported from various sections. There have occurred ten cases of mumps and a few of dysentery. The jail is well kept and ventilated. The poor-house, with no improvement, still remains in bad condition.

Orange—Dr. C. Parris, Hillsboro. A few cases of measles have occurred and catarrhal troubles have prevailed in all portions. Leaving out the cold, wet weather of this month

and the endless amount of muck and mud, the sanitary condition is fairly good. Catarrhal troubles, rheumatism and sciatica have prevailed. No deaths in our town for this month. Some slight improvements are to be made at the poor-house. Sanitary condition of the public buildings is good.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. The sanitary condition of the county has improved and is improving. Our people are acting more on the truths of sanitary science in regard to drinking water, food, drainage, etc. They seem inclined to war against the causes of malaria and other diseases.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. Pneumonia, bronchitis and *La Grippe* have prevailed, but not so extensively as last month. Hog cholera and distemper among horses still linger in a few localities. The sanitary condition of the county is good. A mild form of acute rheumatism and one case of pernicious malarial fever have occurred. The overseer of the Home for the Aged and Infirm has been ordered by the Commissioners to move upon the place that he can look after the welfare of the inmates more closely.

Polk—Dr. Henry Shankle, Mills' Spring. No report.

Randolph—Dr. J. W. Long, Randleman. There have been reported thirteen cases of pneumonia, sixteen of measles, nine of whooping-cough, one each of diphtheria and typhoid fever, and two of cholera-morbus. There has been an epidemic of staggers and pink-eye among horses, and cholera in hogs. My doctors report well, I think. Out of less than twenty-five regular practitioners I have eight nice reports for April besides my own. This is, I venture to say, away over the average. The individual reports show that the senders are interested in this matter. Further, these reports are an interesting study, *e. g.*, one doctor reports eleven cases of pneumonia as having occurred in his practice during the month; another says "measles, *La Grippe* and

pneumonia" are the prevailing diseases in his practice. Notice that *pneumonia* is coupled with measles and *La Grippe*. That doctor has his eyes open! Another says "two cases of puerperal fever from *midwifery* practice." You see our doctors have quit talking about such cases as having "took cold," or "eat something they orten to." We are on the up-grade. Rheumatism, dysentery, catarrhs and insanity are reported. I have seen a typical case of acute purulent pleurisy. The poor-house is in first-rate fix, only too crowded. The jail is in first-class order, and reflects much credit on Mr. Rush, the jailer.

Richmond—Dr. J. M. Covington, Rockingham. No report. (We have indirectly heard of twelve cases of scarlatina.)

Robeson—Dr. R. F. Lewis, Lumberton. Measles has occurred. There has been an epidemic of hog-cholera. The sanitary condition of the county is very good; that of the public buildings is fair. The court-house is to be improved very shortly.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. Measles and whooping-cough have prevailed in this town. There has been very little sickness in a general way. Two reports received from other doctors show whooping-cough, eight cases; pneumonia, eleven cases; typhoid fever, 1 case; many cases of *La Grippe*, bronchitis, diarrhoea, etc. The public buildings are in good sanitary condition. The inmates are well fed and cared for, and there has been but little sickness except *La Grippe*.

Rutherford—Dr. W. Thompson, Cliffdale. No Report.

Sampson—Dr. H. A. Stevens, Clinton. There has been an epidemic of hydrophobia among domestic animals. I have to report a few cases of malarial fever, bronchitis and pneumonia. Measles, whooping-cough and influenza are very prevalent. The sanitary condition of the poor-house is good. That of the jail as before reported; no improvement.

Stanly—Dr. P. Whitley, Plyler. There have been reported ten cases of measles, forty of whooping-cough, two of typhoid fever and one of pernicious malarial fever. Diarrhoea

and bronchitis have prevailed. There has been an epidemic of distemper among horses. There are a great many boggy places in the county, due to so much rain, and now, with dry weather, they have become stagnant and are fruitful sources of disease. We have had more malarial fever than usual in April. Public buildings are as reported last month. Poor-house is in very good condition; nearly all the paupers have been sick, but not due to defects in sanitation.

Stokes—Dr. W. V. McCauless, Danbury. Measles and *La Grippe* have prevailed in most parts of the county. Four cases of diphtheria have been reported. The sanitary condition of the county has been very good; that of the public buildings is fair.

Surry—No Board of Health.

Swain—Dr. L. Davis, Bryson City. The sanitary condition of the county is better than for several years. No sickness of importance—only one case of pneumonia reported. The sanitary condition of the public buildings is about as good as can be.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. Mumps has prevailed in this township, and two cases of typhoid fever have been reported. The sanitary condition of the public buildings is bad.

Union—Dr. W. C. Ramsay, Monroe. A few cases of *La Grippe* and whooping-cough have prevailed. The sanitary condition of the county is generally good. Other than the above there have been no diseases except measles and diarrhoea. Sanitary condition of poor-house good; jail bad.

Vance—Dr. A. Cheatham, Henderson. There has been an epidemic of distemper among horses. The sanitary condition of the county and public buildings is good.

Wake—Dr. Jas. McKee, Raleigh. There have been reported nine cases of mumps, four of measles, and one each of scarlatina and diphtheria. The sanitary condition of the county is as good as it can be; also that of public buildings.

Warren—Dr. P. J. Macon, Warrenton. Chicken-pox and a few cases of pneumonia,

also a few cases of measles, have occurred. The sanitary condition of the public buildings is very good.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. Measles and whooping-cough have prevailed in the eastern part of the county. The jail and poor-house are both in first-class condition; also the county generally.

Wayne—Dr. John Spicer, Goldsboro. The sanitary condition of the county is good; also that of the public buildings.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. There has been in the county a continuance, more or less, of *La Grippe*. Five cases of

pneumonia reported in all parts of the county. There is some dysentery. Measles is on the wane except in the western part, where it seems to be on the increase, with some very severe cases. Cholera in hogs and chickens reported. The sanitary condition of the public buildings is good.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Day, Burnsville. Measles, whooping-cough and mumps have prevailed in in many parts of the country. The sanitary condition of the county is not very good at present. The jail needs covering, and there is talk of doing it soon. The poor-house is nearly finished.

Condition of Jails and Poor-houses by Counties for April, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	12 ^a				34			
Alexander.....					13	500	0	2
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....								
Cabarrus.....	10	*	2	3	18	960	7	12
Caldwell.....	4	*	0	3	8		2	3
Camden.....								
Carteret.....	0				0			
Caswell.....	4	500			25	1,000		
Catawba.....								
Chatham.....	5				27			
Cherokee.....					2	850		
Chowan.....								
Clay.....								
Cleveland.....	7	684		3	21	997		6
Columbus.....	2	*		0	12	*		0
Craven.....								
Cumberland.....	6				17			
Currituck.....								
Dare.....								
Davidson.....	2	*	0	0	23	721	0	3
Davie.....								
Duplin.....	0				16			
Durham.....	3	1,000		1	25 ^b	1,000		6
Edgecombe.....	7	*	3	4	22	*		
Forsyth.....								

^a. Includes 8 in work-house. * Space exceeds 1,000 cubic feet.^b. Includes 17 in work-house.

Condition of Jails and Poor-houses by Counties for April, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin	0				20			
Gaston	8		5	3	12			
Gates								
Graham								
Granville	2	*			20	900		
Greene					10	1,000		1
Guilford	9	*			33	*		
Hallfax	14			6	50			7
Harnett								
Haywood								
Henderson								
Hertford								
Hyde								
Iredell	16				23			
Jackson	0				3	800		
Johnston	2	*	2	2	15	1,000	5	6
Jones					4	*		
Lenoir								
Lincoln	4				23			
McDowell	4	600	1	2	5	550	1	1
Macon								
Madison								
Martin								
Mecklenburg								
Mitchell	5				4			
Montgomery	5	(?) 10	2	4	15	(?) 15	8	12
Moore	2	*	2	2	8	*	0	2
Nash	3	*	1	1	36	900	12	5
New Hanover	33	600	20	12	24a	*	24	8
Northampton					38	800	12	10
Onslow	0				4	*	1	1
Orange	1	512			30	*	12	14
Pamlico								

* Cubic space extends 1,000 cubic feet. a. Includes 3 in house of correction.

Condition of Jails and Poor-houses by Counties for April, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	0				4			
Perquimans.....								
Person.....								
Pitt.....	0				18		1	
Polk.....								
Randolph.....	3	*	0	2	38	440	10	11
Richmond.....								
Robeson.....	8	851			9	800		
Rockingham.....								
Rowan.....	12	600	1	9	17	(?) 200		
Rutherford.....								
Sampson.....	3				19			
Stanly.....	0				13	800	0	1
Stokes.....	3	600	0	1	10	600	2	3
Surry.....								
Swain.....	1							
Transylvania.....								
Tyrrell.....	0				0			
Union.....	1	*			15	*		
Vance.....	10	935	6	4	13	*		
Wake.....	3	*			102 ^a			
Warren.....	0				16	*	10	6
Washington.....								
Watauga.....	5				7			
Wayne.....	2	952	0	1	4	*	0	0
Wilkes.....								
Wilson.....	5	*	4	5	19	*	1	3
Yadkin.....								
Yancey.....	3	768	0	1				

* Space exceeds 1,000 cubic feet. ^a Includes 52 in work-house.

Meteorological Summary for North Carolina, April, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMAN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).								Mean Humidity.	Total Precipitation.	No. of Days				Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range		Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	
Asheville.....	56.0	84	30	66.5	23	5	45.6	61	20.9	59.1	1.81	16	9	5	8 N.W.
Bakersville.....	51.6	80	16	64.3	24	4	38.9	56	25.4	70.8	2.14	18	7	5	9 N.W.
Charlotte.....	61.2	85	20	72.0	26	5	50.3	59	21.7	.....	2.79	17	11	2	5 S.
Chapel Hill.....	60.9	87	30	73.0	30	5-6	49.7	57	23.3	.....	2.13	16	13	1	8 W.
Douglas.....	57.7	86	30	70.8	24	6	44.6	62	26.2	.....	1.95	12	12	6	5 N. E.
Franklin.....	54.4	88	18	68.7	20	5	40.0	63	28.7	.....	1.10	7	5	18	7 S.
Hendersonville.....	56.5	79	30	65.2	24	6	48.6	55	16.6	80.7	1.35	5	8	17	5 W.
Kitty Hawk.....	57.5	84	19	66.3	36	5	48.7	48	17.6	.....	1.40	15	13	2	10 S. W.
Littleton.....	57.2	86	19	69.8	27	5	44.6	59	25.2	.....	4.80	13	10	7	8 N.W.
Lexington.....	58.5	85	30	69.0	26	6	48.0	59	21.0	71.7	2.01	15	9	6	8 S.
Lenoir.....	57.5	82	20	66.4	26	5-6	48.1	56	18.3	.....	3.20	.....	.....	7	.....
Morganton.....	59.5	86	30	68.8	29	5	49.2	57	19.6	63.9	2.42	.....	.....	5	.....
Mt. Airy.....	55.9	85	30	68.8	24	6	43.0	61	25.8	.....	4.20	12	10	8	6 S. W.
Oak Ridge.....	58.2	84	19	68.5	28	5	47.9	56	20.6	78.1	4.46	10	10	10	10 N.W.
Pittsboro.....	57.6	87	18	66.9	28	5	48.2	59	18.7	.....	1.70	12	12	6	5 S.
Raleigh.....	59.6	85	19	70.1	31	5	49.2	54	20.9	64.6	2.98	14	8	8	7 S.
Southport.....	62.0	79	20	69.0	33	5	54.9	46	14.1	.....	1.73	22	5	3	3 S.
Southern Pines.....	62.6	89	20	75.1	28	5	50.0	61	25.1	.....	1.26	17	10	3	8 S.
Salisbury.....	62.0	84	20	69.6	34	6	55.1	50	14.5	.....	2.47	.....	.....	7	.....
Weldon.....	58.7	85	20	69.2	29	5	48.2	56	21.0	.....	3.34	21	1	8	7 S.
Washington.....	61.0	86	19	72.5	33	5	49.6	53	22.9	77.3	1.34	19	9	2	6 N.W.
Wilmington.....	62.1	82	20	70.1	36	5	54.1	46	16.0	76.2	1.15	16	11	3	3 S.

STATE METEOROLOGICAL SUMMARY FOR APRIL, 1891.

From the N. C. State Weather Service.

Mean Barometer 30.07 inches; normal for April 30.02.

Highest Barometer 30.47 inches on the 10th at Norfolk, Va.

Lowest Barometer 29.55 inches on the 2d at Norfolk, Va.

Mean temperature 59.1 degrees; normal for April 57.9 degrees.

Highest temperature 89 on the 20th at Southern Pines, and on the 17th at Willetton.

Lowest temperature 20 on the 5th at Franklin.

Average rain-fall 2.22 inches; normal for April 4.00.

Greatest monthly rain-fall 4.80 inches at Littleton.

Least monthly rain-fall 1.10 inches at Franklin.

Average number of cloudless days 15.

Average number of partly cloudy days 9.

Average number of cloudy days 6.

Average number of rainy days 7.

Prevailing wind direction, South; average hourly velocity 7.2 miles per hour.

Prevailing direction from many year's observations, South-west; average hourly velocity 9.1 miles.

Killing frosts occurred on the 5th and 6th.

Mortuary Report for April, 1891.

[illegible]

BULLETIN

OF THE

NORTH CAROLINA BOARD OF HEALTH.

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 J. L. LUDLOW, C. E., Winston.

THOMAS F. WOOD, M. D., *Secretary and Treasurer*, Wilmington.

Entered at the post-office at Wilmington, N. C., as second-class mail matter.

VOL. VI.

JUNE, 1891.

No. 3.

Summary of Reports from County Superintendents of Health for May, 1891.

Alamance—Dr. Geo. W. Long, Graham. The sanitary condition of the county is good. *La Grippe* has about subsided. Catarrhal dysentery prevails to a limited extent. The sanitary condition of the public buildings is about as usual—probably somewhat improved. Could be greatly improved at the poor-house if the authorities would employ some efficient help for the Superintendent, who is not able to do it all.

Alexander—Dr. J. B. Watts, Taylorsville. There has been very little sickness during the month—only one case of typhoid fever and numerous mild cases of intestinal trouble. There still exists an epidemic of distemper among horses. The sanitary condition of the public buildings is about as last reported, and there are no efforts to improve it. The sanitary condition of the county remains very good.

Ashe—No Board of Health.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Beaufort—Dr. W. A. Blount, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. Newton Robinson, Elizabeth-town. No report.

Brunswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. No report.

Cabarrus—Dr. R. S. Young, Concord. The sanitary condition of the county is good. There have occurred about thirteen cases of whooping-cough. The sanitary condition of the public buildings is good.

Caldwell—Dr. A. A. Kent, Lenoir. There has been an epidemic of distemper among horses. The general health of the county is better than usual at this season; very few cases of cholera-morbus or cholera infantum.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. The general sanitary condition of the county is very satisfactory. Measles has occurred. Our jail has been lately repaired, and is in satisfactory condition. The court-house is old but comfortable.

Caswell—Dr. R. H. Williamson, Yanceyville. Dysentery and rheumatism have prevailed. The general sanitary condition of the county is good. The rain-fall has been unusually large for the last month. The sanitary condition of the public buildings is good.

Catawba—Dr. H. T. Chapin, Pittsboro. The health of the county has been excellent. There has some dysentery occurred. The jail and the poor-house are in good condition.

Cherokee—Dr. J. F. Abernathy, Murphy. There have been reported about fifty cases of measles and one of typhoid fever. With the exception of a few cases of dysentery and two or three of flux, this county has been very healthy. Measles is mild in type. The jail is in bad condition—neither clean nor well ventilated. I take it, the more filth the greater should be the ventilation. The new court-house is in rapid progress, and, it is said, will be second to none in the State for sanitary completeness.

Chowan—No Superintendent of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. Two cases of typhoid fever have been reported. The general sanitary condition of the county is very good—better than usual at this season of the year.

Columbus—Dr. I. Jackson, Whiteville. There has occurred one case of typhoid fever. The sanitary condition of the county is very good. Diarrhœa of a mild form has prevailed to some extent. The sanitary condition of the public buildings is very good.

Craven—Dr. Leinster Duffy, New Berne. Measles, mumps and whooping-cough have been quite prevalent. The sanitary condition of the county and that of the public buildings is good.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county is good. Bowel diseases and malarial troubles have been the prevailing diseases during the month. Sanitary condition of the public buildings is good.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Measles has prevailed in scattered portions of the county. The sanitary condition of the county is very good, but could be made almost perfect by proper drainage. This is much neglected, but the people each year are learning to appreciate its necessity. No change in the public buildings since last report.

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. No report.

Durham—Dr. N. M. Johnson, Durham. Measles has prevailed. The health of the county has been quite good. Arrangements are being made for the erection of a more suitable house for the poor.

Edgecombe—Dr. Donald Williams, Tarboro. Dysentery has prevailed in all portions of the county, and of very obstinate character, not yielding to treatment. With this exception, the sanitary condition of the county is good. That of the public buildings is good. The jail is new.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. Measles has prevailed in many portions of the county. Dysentery and other bowel troubles prevail to quite a considerable extent—generally of a mild type. The sanitary condition of the public buildings is good; there is rarely a case of sickness in either jail or poor-house.

Gaston—Dr. E. B. Holland, Dallas. Measles, whooping-cough, typhoid fever and pneumonia have prevailed in parts of the county. The sanitary condition of the county and public buildings is good.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. J. M. Hays, Oxford. Chicken-pox has prevailed. The sanitary condition of the county is good.

Greene—Dr. E. H. Sugg, Snow Hill. Two cases of measles have occurred and dysentery has prevailed. The general sanitary condition of the county and public buildings is good.

Guilford—Dr. E. H. Michaux, Greensboro. We have had considerable diarrhoea and dysentery; also some malarial fevers and a few cases of typhoid. In general, there has been very little sickness in town or county. The sanitary condition of the public buildings is very good.

Halifax—Dr. A. B. Pierce, Weldon. Dysentery and infantile diarrhoea have prevailed. The health of the county has been good. No change in the condition of the public buildings.

Harnett—No Board of Health.

Haywood—Dr. R. L. Allen, Waynesville. The health of the county has been generally good; no contagious diseases or epidemics that I have heard of.

Henderson—Dr. W. B. Reese, Hendersonville. No report.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. Measles has been epidemic, and diarrhoea, dysentery and pernicious malarial fever have occurred. The sanitary condition of the county is very good; that of the poor-house is good; that of the jail is not so good, nor can it be. The court-house needs ventilation; more than many cases heard there, perhaps.

Jackson—Dr. J. M. Chandler, Dillsboro. The sanitary condition of the county never was better. Three cases of typhoid fever and one of hæmorrhagic malarial have occurred. The sanitary condition of the public buildings is good.

Johnston—Dr. L. L. Sasser, Smithfield. There have been reported twenty cases of measles and one of typhoid fever. The sani-

tary condition of the county is very good; also that of public buildings.

Jones—No Board of Health.

Lenoir—No Board of Health.

Lincoln—Dr. W. L. Crouse, Lincolnton. No report.

Macon—Dr. J. M. Lyle, Franklin. Four cases of measles have been reported. *La Grippe* has prevailed everywhere. The sanitary condition of the county is good. *La Grippe* has prevailed to an alarming extent, and a good number of deaths have occurred. The sanitary condition of the public buildings is good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. Three cases of typhoid fever have been reported. Diarrhoea and dysentery have prevailed in all portions of the county. I have unofficial reports of scarlatina in the upper part of the county. Some mild cases of malarial fever have been reported. Have heard of no fatal cases of diarrhoea or dysentery. The sanitary condition of the public buildings is good. The buildings will be whitewashed and the grounds limed at once.

McDowell—Dr. J. H. Gilkey, Marion. Catarrhal affections have prevailed in some portions. The health and general sanitary condition of the county have been unusually good during the past month, having had only a few cases of bronchitis and bronchial catarrh. Sanitary condition of the public buildings is good.

Mecklenburg—No Board of Health.

Mitchell—Dr. E. C. Smith, Bakersville. The sanitary condition of the county is better than at any time for the past ten years. With the exception of a few cases of measles of a mild type, we are having no sickness. Both alms-house and jail are kept in a healthful condition. There are yet a few cases of *La Grippe* in the county. Distemper prevails among horses.

Montgomery—Dr. F. E. Asbury, Asbury. No report.

Moore—Dr. Gilbert McLeod, Carthage. Measles has prevailed in different parts of the county; it is subsiding now. Dysentery and diarrhœa are somewhat prevalent now, but they are mild. Our public buildings are in good sanitary condition.

Nash—Dr. G. W. Lewis, Springhope. Measles has prevailed in divers parts of the county. The general sanitary condition of the county is good. In addition to measles, we have a few cases of utricaria, and one of purpura hæmorrhagica; also a few cases intermittent fever. The sanitary condition of the public buildings is good.

New Hanover—Dr. F. W. Potter, Wilmington. There have been reported twelve cases of measles, three of whooping-cough and three of typhoid fever, besides a few cases of *La Grippe* and a few of malarial fever, the last named disease being attended frequently with tonsilitis, especially among the whites. The jail is in good condition. The poor-house, called "New Hanover County Home," is in tolerably good condition.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. J. L. Nicholson, Richlands. A good many cases of measles have occurred. Our people have been more than ordinarily healthy during May. There has been some dysentery and a few cases of malarial fever. The jail is in good sanitary condition. The poor-house is bad.

Orange—Dr. D. C. Parris, Hillsboro. Many cases of measles have occurred. Dysentery and diarrhœa have prevailed in all portions of the county. The sanitary condition of the county is good. The dysenteric diseases which have appeared up to this time, have been rather severe, but are amenable to treatment. The sanitary condition of both jail and poor-house is good; that of other public buildings fairly good. There has been some cholera among chickens, but not epidemic.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. There has been an epidemic of cholera among hogs. Bowel diseases have prevailed generally. Many cases are severe, and in a few cases fatal. Cholera-infantum is of a high order of severity. I find it, in its worse cases, complicated with malaria, demanding calomel and quinine in its early stages. Typhoid pneumonia has prevailed, also typho-malarial fever.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. Dysentery has prevailed in almost all portions of the county. Have had a few cases of hog and chicken cholera. The sanitary condition of the county has been better than in several months; only two cases of pneumonia seen and a few cases of malarial fever and whooping-cough. There is a large building being erected for cooking and dining purposes for the aged.

Polk—Dr. Henry Shankle, Mills' Spring. Acute peritonitis seems to have prevailed in several portions of the county. The sanitary condition of the county is not good, as there has been much bowel trouble, such as dysentery and diarrhœa. There is some little work being done on the jail.

Randolph—Dr. J. W. Long, Randleman. There have been reported eight cases of measles and one of pernicious malarial fever, with some *La Grippe*, dysentery, rheumatism, bronchitis, pneumonia, and babies from different portions. Dysentery is the prevailing disease and it is very general. The sanitary condition of the jail is good; also of the poor-house, except it is too crowded.

Richmond—Dr. J. M. Covington, Rockingham. There have been reported eight cases of whooping-cough, seven of scarlatina, and three of typhoid fever. Acute catarrhs and bowel troubles of mild type have prevailed in all parts of the county. The sanitary condition of the county is good; that of the home is good, and that of the jail improved.

Robeson—Dr. R. F. Lewis, Lumberton. Bowel affections have prevailed, and there have been some measles. There has been an epidemic of hog cholera. The sanitary condition

of the county is fair. Also that of the public buildings; improvement of court-house determined upon.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. Measles and whooping-cough, and their *sequelæ*, have prevailed in some sections. The sanitary condition of the county is about as usual at this time of the year. The prevailing diseases have been mild and less than usual. The jail and home are in good sanitary condition.

Rutherford—Dr. W. A. Thompson, 'Cliffdale. The sanitary condition of the county is moderately good—not as good as it should be, as there are so many that know nothing of sanitation, and care less. The public buildings are now in good sanitary condition. The jail is kept clean and nice, and the poor-house is also as clean as the quality of the buildings will permit.

Sampson—D. J. A. Stevens, Clifton. The following diseases have been quite prevalent: Measles, whooping-cough, influenza, diarrhoea, dysentery, a few cases of malarial and one of typhoid fever. I have sent out blank forms to the county physicians, but they do not report. The county needs a new jail. The poor-house is well kept and is a credit to the county.

Stanly—Dr. D. P. Whitley, Plyler. There have been reported six cases of measles, ten of whooping-cough and five of typhoid fever. Typhoid fever, diarrhoea and bronchial troubles have prevailed in the western and north-western part of the county. The sanitary condition of the county is about as reported last month. In my practice there has been more diarrhoea and typhoid fever than usual in May. My reports are necessarily imperfect, because I cannot get the doctors to report. The sanitary condition of the poor-house is good; that of the jail is bad. I recommend that the commissioners adopt a better system of sewerage in the jail, and think that they will do it shortly. A building committee has been appointed for the new court-house.

Stokes—Dr. W. V. McCauless, Danbury. Acute enterocolitis and measles have prevailed

in several sections. One case of diphtheria has been reported. The sanitary condition of the county has been good; also that of the public buildings.

Surry—No Board of Health.

Swain—Dr. R. L. Davis, Bryson City. There has been no sickness in the county except a few cases of diarrhoea—mostly among children. The sanitary condition of the public buildings is about as good as it can be.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. Dysentery and mild bowel diseases have prevailed. The sanitary condition of the county was remarkably good, there being but very little sickness. Poor-house is in good condition, the jail bad. The county is now preparing to build a new jail.

Vance—Dr. A. Cheatham, Henderson. Measles, whooping-cough and dysentery have been the principal troubles. The sanitary condition of the public buildings is good.

Wake—Dr. James McKee, Raleigh. Three cases of scarlatina have been reported. The sanitary condition of county and city is only moderately good. So much rain has fallen that the usual spring policing has been interfered with. All the public buildings are in good condition.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. No report.

Wayne—Dr. John Spicer, Goldsboro. The sanitary condition of the county is good. There have been several cases of dysentery, but it could hardly be called an epidemic. The sanitary condition of the public buildings is good.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. In the western part of the county measles is again reported with complications. Intestinal troubles are prevalent all over the county, but of mild type. Skin diseases reported from one locality, and a great deal of neuralgia from

another. Cholera among hogs and chickens is reported from the western part of the county, and in the same section pneumonia. The sanitary condition of the poor-house is being greatly improved; that of the jail and poor-house is only fair. Efforts are being made to improve the sanitary condition of the town.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Ray, Burnsville. Many cases of measles and whooping-cough have been reported. The sanitary condition of the county is very good at present. The jail is not kept clean, and needs covering; there is some talk of doing it soon. Poor-house just finished.

Summary of Mortuary Statistics for May, 1891.

(THIRTEEN TOWNS.)

	White.	Col'd.	Total.
Aggregate population.	43,214	37,712	80,926
Aggregate deaths.....	58	57	115
Temporary annual death- rate per 1,000.....	16.1	18.1	17.1
Deaths under 5 years old,			42
<i>Causes of death.</i>			
Typhoid fever.....	1	0	1
Malarial fever.....	0	1	1
Pneumonia.....	4	1	5
Consumption.....	8	13	21
Brain diseases.....	3	2	5
Heart diseases.....	3	1	4
Neuratic diseases....	4	4	8
Diarrhoeal diseases....	8	6	14
All other diseases....	23	19	42
Accident and violence	0	3	3
Suicide.....	1	0	1
Still-born.....	3	7	10
	58	57	115

Review of Diseases for May, 1891

Bronchitis—Was reported from McDowell and Randolph—2 counties.

Chicken-Pox—From Granville.

Chicken Cholera—From Orange, Pitt and Wilson—3 counties.

Cholera Infantum—From Caldwell and Pender—2 counties.

Cholera-morbus—From Caldwell.

Diarrhea—From Columbus, Cumberland, Guilford, Halifax, Iredell, Martin, Moore, Orange, Pender, Polk, Richmond, Robeson, Sampson, Stanly, Stokes, Swain and Wilson—17 counties.

Diphtheria—From Stokes.

Distemper—From Alexander, Caldwell and Mitchell—3 counties.

Dysentery—From Alamance, Caswell, Catawba, Cherokee, Edgecombe, Franklin, Greene, Guilford, Halifax, Iredell, Martin, Moore, Orange, Pender, Pitt, Polk, Randolph, Sampson, Tyrrell, Vance and Wayne—21 counties.

Hog Cholera—From Pender, Pitt, Robinson and Wilson—4 counties.

La Grippe—From Macon, Mitchell, New Hanover, Pender and Sampson—5 counties.

Malarial Fever—From Cumberland, Guilford, Martin, Nash, New Hanover, Pitt and Sampson—7 counties.

Malarial Fever (hemorrhagic)—From Jackson.

Malarial Fever (pernicious)—From Iredell and Randolph—2 counties.

Measles—From Carteret, Cherokee, Craven, Davidson, Durham, Franklin, Gaston, Greene, Iredell, Johnston, McDowell, Mitchell, Moore, Nash, New Hanover, Onslow, Orange, Randolph, Robeson, Rowan, Sampson, Stanly, Stokes, Vance, Wilson and Yancey—26 counties.

Mumps—From Craven.

Pneumonia—From Gaston, Pender, Pitt and Randolph and Wilson—5 counties.

Rheumatism—From Caswell and Randolph—2 counties.

Scarlatina—From Martin, Richmond and Wake—3 counties.

Typhoid Fever—From Alexander, Cherokee, Cleveland, Columbus, Gaston, Guilford, Jackson, Johnston, Martin, New Hanover, Richmond, Sampson and Stanly—13 counties.

Typho-Malarial Fever—From Pender.

Whooping-Cough—From Cabarrus, Craven, Gaston, New Hanover, Pitt, Richmond, Rowan, Sampson, Stanly, Vance and Yancey—11 counties.

Condition of Jails and Poor-houses by Counties for May, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	1				33			
Alexander.....	0				11	500	0	2
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....								
Cabarrus.....	8	*	3	3	25	994	8	10
Caldwell.....	4	958	2	2	6		2	2
Camden.....								
Carteret.....	0				0			
Caswell.....	6	450		2	24	1,000	9	3
Catawba.....								
Chatham.....	1				27			
Cherokee.....	3	960			3	575		
Chowan.....								
Clay.....								
Cleveland.....	8	864		4	25	997		6
Columbus.....	6	*		3	11	*		0
Craven.....	12	*			17	*	10	2
Cumberland.....	5				17			
Currituck.....								
Dare.....								
Davidson.....	2	*	0	0	23	721	0	3
Davie.....								
Duplin.....								
Durham.....	4	1,000		2	33a	1,000		5
Edgecombe.....	7	*	3	4	23	*		
Forsyth.....								

* Air space exceeds one thousand cubic feet.

(a) Includes 17 in house of correction.

Condition of Jails and Poor-houses by Counties for May, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin	0				20			2
Gaston	10				10			
Gates								
Graham								
Granville	3	*			20	900		
Greene					10	1,000		1
Guilford	14	898			32	1,250		
Halifax	8				50			
Harnett								
Haywood								
Henderson								
Hertford								
Hyde								
Iredell	12				24			
Jackson					4	200		2
Johnston	2	*	2	2	11	*	4	4
Jones								
Lenoir								
Lincoln								
McDowell	3	550	1	2	5	600	1	0
Macon	5	*	0	1				
Madison								
Martin	5	1,000	0	2	17	550	2	5
Mecklenburg								
Mitchell								
Montgomery								
Moore	1	*	0	0	8	*	0	2
Nash	3		1	1	34		9	4
New Hanover	36	600	20	21	23a	*	20	12
Northampton								
Onslow	1	*			4	*	1	1
Orange	2	512			28	*	12	15
Pamlico								

* Air space exceeds one thousand cubic feet.

a. Includes 3 in house of correction.

Condition of Jails and Poor-houses by Counties for May, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....								
Perquimans.....								
Person.....								
Pitt.....	4			2	18			1
Polk.....					2	900		
Randolph.....	6	*	1	2	38	425	10	11
Richmond.....	1				6			
Robeson.....	6	*			9	800		
Rockingham.....								
Rowan.....	4	*			14	*		
Rutherford.....	1			1	27	900		7
Sampson.....	2				17			
Stanly.....	2	*	0	2	13	900	0	1
Stokes.....	1	609	0	0	9	600	2	3
Surry.....								
Swain.....	1							
Transylvania.....								
Tyrrell.....								
Union.....	1	*			15	*		1
Vance.....	6	*	2	2	14	*		
Wake.....	5	*			108 ^a			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	2	952	0	0	3	*	0	0
Wilkes.....								
Wilson.....	4	*	1	3	(?)	*	6	6
Yadkin.....								
Yancey.....	3	*	0	2	0			

* Air space exceeds one thousand cubic feet.

^a. Includes 46 in house of correction.

Meteorological Summary for North Carolina, May, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr).									Mean Humidity.	Total Precipitation.	No. of Days				Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range			Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	
Asheville.....	62.8	85	10	72.8	34	8	51.6	51	21.2	68.6	4.23	16	2	13	16	N.
Bakersville.....	56.0	83	24	68.4	23	7	43.5	60	24.9	71.0	4.85	.....	.....	.....	10	E.
Charlotte.....	65.4	90	11	76.3	38	7	51.6	52	21.7	68.2	7.58	18	4	9	12	S.
Chapel Hill	66.2	95	11	78.2	34	6	54.3	61	23.9	.....	8.75	.....	.....	.....	14	.....
Douglas.	63.2	93	22	78.5	30	6	47.8	63	30.7	.....	8.10	12	11	8	13	S. W.
Franklin.	60.0	87	16	75.9	23	6	44.0	65	31.9	.....	.....	13	6	12	.....	S.
Hendersonville.....	61.9	82	10	70.2	41	6	56.1	41	14.1	84.6	3.58	11	5	15	7	W.
Kitty Hawk.....	61.6	81	24	69.1	45	8	55.7	36	13.4	.....	2.97	10	7	14	14	N. E.
Littleton.	61.8	91	23	73.9	31	5	49.8	60	24.1	.....	8.07	10	8	13	16	S.
Lexington.....	64.4	91	11	75.7	33	7	53.1	58	22.6	75.5	7.83	11	8	12	16	N. E.
Lenoir.....	62.6	84	10	70.9	40	7	55.6	44	15.3	.....	5.10	.....	.....	.....	9	.....
Morganton.....	63.0	88	23	73.3	37	7	55.2	51	18.1	70.1	4.59	.....	.....	.....	13	.....
Mount Airy.....	61.4	89	11	73.9	28	7	48.9	61	25.0	.....	6.48	12	8	11	9	S. W.
Oak Ridge.....	63.2	88	11	74.6	33	7	51.8	55	22.8	84.6	8.26	9	6	16	15	N. E.
Pittsboro	63.2	90	11	73.8	34	6	52.7	36	21.1	.....	7.00	11	9	11	9	N. E.
Raleigh.....	64.5	90	13	74.5	38	7	54.5	52	20.0	70.0	9.24	15	5	11	15	N.
Southport	67.4	82	30	75.0	40	7	59.9	42	15.1	.....	2.24	19	6	6	8	S.
Southern Pines.....	67.5	93	23	82.1	37	7	52.9	56	29.2	.....	11.08	20	3	8	14	S.
Salisbury	67.1	87	11	75.2	42	7	59.2	45	16.0	.....	6.05	12	8	11	9	S. W.
Weldon.....	64.4	89	11	75.1	34	6	53.6	55	21.5	.....	9.34	16	1	14	14	S.
Washington.. ..	66.2	90	1	78.0	36	6	54.5	54	23.5	77.7	6.14	13	8	10	14	N. E.
Wilmington.. ..	67.6	85	3	76.3	41	7	58.9	44	17.4	74.8	1.03	10	14	7	8	S.

STATE METEOROLOGICAL SUMMARY FOR MAY, 1891.

From the N. C. State Weather Service.

Mean Barometer 30.06 inches; normal for May 30.01.

Highest Barometer 30.49 inches on the 21st at Norfolk, Va.

Lowest Barometer 29.69 inches on the 15th at Kitty Hawk.

Mean temperature 64.2 degrees; normal for May 67.5 degrees.

Highest temperature 95 on the 11th at Chapel Hill.

Lowest temperature 23 on the 7th at Bakersville.

Average rain-fall 5.36 inches; normal for May 2.16 inches.

Greatest monthly rain-fall 11.08 inches at Southern Pines.

Least monthly rain-fall 1.03 inches at Wilmington.

Average number of cloudless days 13.

Average number of partly cloudy days 7.

Average number of cloudy days 11.

Average number of rainy days 12.

Prevailing wind direction, South; average hourly velocity 6.4 miles per hour.

Prevailing direction from many years' observations, South west; average hourly velocity 7.9 miles.

The month was cold and wet, with killing frosts on the 6th and 7th.

Mortuary Report for May, 1891.

[illegible]

BULLETIN

OF THE

NORTH CAROLINA BOARD OF HEALTH.

Published Monthly at the Office of the Secretary of the Board, at Wilmington, N. C.

SUBSCRIPTION FIFTY CENTS A YEAR.

H. T. BAHNSON, M. D., *Pres.*...Salem.
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J. M. BAKER, M. D.,.....Tarboro.
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THOMAS F. WOOD, M. D., *Secretary and Treasurer*, Wilmington.

Entered at the post-office at Wilmington, N. C., as second-class mail matter.

VOL. VI.

JULY, 1891.

NO. 4.

Election of Superintendents of Health.

For the benefit of those interested, we will give our interpretation of the amendment to the laws regulating the election of County Superintendents of Health.

The law was amended some four years since by making the day for this election the *first Monday in September*, instead of the first Monday in January, as it was before. At that time we wrote to the Attorney General, asking his opinion as to the time the newly elected Superintendents should take their office, and sent out to each Superintendent in the State a copy of his letter, and an explanation of it. Then there were some incumbents who had been elected until the first Monday in January, the terms of some expiring in 1887 and others in 1888, and the circulars sent out were to explain when their successors should assume the office.

As the term of office is only two years, there are at present no Superintendents in office whose term does not expire either the first Monday in next September or the first Monday in September of 1892; for there can have been no

legal election since the passage of the amendment except on the first Monday in September.

Of course any county can hold a meeting for the purpose of organizing a Board of Health at any time, and may elect a Superintendent at that meeting, but he must be considered as elected to fill an unexpired term, and his successor must be elected on the first Monday in September next following.

We hope that the officers who may be elected next September may, whether they be old Superintendents re-elected, or new men, take hold of their work with the determination to make the State Board more useful even than it has been. Having no executive powers the Board must depend entirely, or almost so, for its usefulness on the energy and *faithfulness* of the Superintendents, and while we are sorry to be able to say so, there are a very great many of them who might show more interest in the work of the State Board, and not have to put themselves to much trouble either. The generality of the reports received at this office are meagre in the extreme; and there are some who do not fill out that part of the report that refers to the

condition of the inmates of the jail and poor-house at all, while others content themselves with "See last report," or "No change since last month," or some other similar phrase that is a little bit easier than finding out just what the facts are. Even if the conditions one month are the same as they were the preceding month, this report should be *filled out each month*, that at the end of the year a summary of the year may be made up.

Again there are some that tell of no sickness during the month at all, simply because there did not happen to be an *epidemic* of some *contagious* disease. We desire the nature of the *prevailing* diseases, no matter how simple they may be. It is very important to have this, if our statistics of the diseases prevailing in different counties at different seasons of the year are to be of any value.

All this has not been written to complain, for we know against what lack of interest and co-operation on the part of the profession some of our reporters have to strive, but to give a hint to those who are desirous of improving the State Board that will show them how they can help us.

For the BULLETIN.

The Hygienic Importance of Forests.

BY PROF. E. EBERMEYER.

The popular idea that the air of forests is especially favorable to health on account of the greater amount of oxygen in it, is a complete error. The average per cent. of oxygen in forest air is actually less than that in the open land. The error is easily seen when one considers how little oxygen the forest produces, in comparison with the quantity taken up by men and animals. It has been calculated that the quantity of oxygen given off by one hectare ($2\frac{1}{2}$ acres) of forest would supply only a single household of four persons.

It is not to any surplus of oxygen, but to its greater purity, that forest air owes its hygienic value. It is free from smoke or soot, and from injurious gases and vapors. Moreover, it is poorer in *bacteria* than city air is. Bacteriological researches by Serasini and J. Arata show that the leaves of trees act as a filter, and by

this means purify the air from spore-laden dust and micro-organisms. Furthermore, the climatic conditions which forests cause and conserve are of hygienic importance. The protection against the heat of the sun and against strong winds, more especially damp northerly winds and hot parched *sirrocos*, which easily produce inflammatory diseases; the greater constancy of the temperature, and, finally, the greater amount of ozone in forest air, fully account for its sanitary reputation.

The soil of a forest has a very important influence upon the dissemination of health-injuring fungi and bacteria. The considerable amount of moisture held by woodland soil, and the comparative smallness of its valuation; its acid character caused by free humic acid; the difficult decomposability of its so-called raw humus; the relative poverty of wood-humus in nutritive matter, and the considerably lower temperature of shaded soil, are the characteristic peculiarities of forest soils, against which the poorly resistant pathogenic micro-organisms can make little headway. Indeed, as has been shown by numerous experiments, pathogenic bacteria, as *Bacillus oedematis maligni*, and *B. septicus agrigenus*, which in manured soil remain alive, or even increase abundantly, in forest soil completely fail. Epidemic diseases, like cholera, yellow fever, malaria, and others, are not wholly absent from wooded territory, but their virulence has certainly been lessened by planting forests.—
Translated from the German by Gerald McCarthy.

THE THIRD BIENNIAL REPORT of the Board of Health is in hand, and will be mailed to anyone in the State making application to this office. They have not been mailed to Superintendents of Health, because there were a number for distribution at the meeting in Asheville, where many of the Superintendents secured copies. I will be glad if those who were not present at the meeting, or failed to secure a copy of the report, will let us know, that a copy may be sent them. And I hope all Superintendents will study this report closely, and see wherein, by making fuller and more accurate reports, they can assist the Secretary in making the next report better.

*Summary of Mortuary Statistics for June,
1891.*

(FOURTEEN TOWNS.)

	<i>White.</i>	<i>Col'd.</i>	<i>Total.</i>
Aggregate population.	44,814	38,112	82,926
Aggregate deaths.....	68	77	145
Temporary annual death- rate per 1,000.....	18.2	24.2	21.1
Deaths under 5 years old,			76
<i>Causes of death.</i>			
Typhoid fever	3	3	6
Malarial fever.....	0	2	2
Diphtheria.....	2	0	2
Whooping-cough	1	2	3
Measles.....	0	3	3
Pneumonia.....	0	4	4
Consumption.....	5	7	12
Brain diseases.....	1	1	2
Heart diseases.....	4	9	13
Neurotic diseases....	2	5	7
Diarrhoeal diseases...	26	18	43
All other diseases....	17	19	36
Accident and violence	2	3	5
Still-born.....	5	2	7
	<hr/> 68	<hr/> 77	<hr/> 145

Review of Diseases for June, 1891

Cerebro-spinal Meningitis—From Pender.

Cholera (hogs)—From Chatham, Nash, Pender, Randolph, Rutherford and Tyrrell—6 counties.

Cholera-infantum—From Iredell, McDowell and Randolph.

Cholera-morbus — From Caldwell, Iredell and Randolph—3 counties.

Diarrhæa—From Duplin, Edgecombe, Halifax, Iredell, Martin, McDowell, Mitchell, Orange, Pender, Sampson, Union, Vance and Wayne—13 counties.

Diphtheria—From New Hanover, Randolph and Wake—3 counties.

Distemper (horses)—From Randolph.

Dysentery—From Alexander, Caldwell, Caswell, Chatham, Cleveland, Duplin, Greene,

Halifax, Iredell, Lincoln, Martin, McDowell, Nash, Orange, Pender, Randolph, Sampson, Vance, Warren, Wilson and Yadkin—21 counties.

La Grippe—From Greene, Macon and Orange—3 counties.

Malarial Fever—From Caswell, Duplin, Greene, Guilford, Iredell, Johnston, Martin, Nash, New Hanover, Pender, Sampson and Wilson—12 counties.

Malarial Fever, pernicious—From New Hanover and Randolph—2 counties.

Measles—From Alexander, Carteret, Catawba, Davidson, Durham, Edgecombe, Johnston, Lincoln, Mitchell, New Hanover, Orange, Randolph, Richmond, Robeson, Rowan, Sampson, Vance, Warren, Watauga, Wayne and Yancey—21 counties.

Mumps—From Duplin and Tyrrell — 2 counties.

Pink-Eye (horses)—From Rutherford.

Scarlatina (unofficial)—From Martin.

Typhoid Fever—From Alexander, Caldwell, Catawba, Cleveland, Columbus, Gaston, Greene, Iredell, Johnston, Lincoln, Martin, Mitchell, Montgomery, New Hanover, Pender, Randolph, Richmond, Robeson, Rowan, Rutherford, Sampson, Tyrrell, Union, Wake, Wilson, Yadkin and Yancey—27 counties.

Typhoid Pneumonia—From Gaston.

Typho-Malarial—From Orange.

Whooping-Cough—From Catawba, Davidson, Iredell, Johnston, Lincoln, Mitchell, New Hanover, Randolph, Richmond, Rowan, Sampson, Warren, Watauga, Wayne, Wilson and Yancey—16 counties.

Summary of Reports from County Superintendents of Health for June, 1891.

Alamance—Dr. G. W. Long, Graham. There has been no epidemic among people or domestic animals. The work-house is poorly ventilated.

Alexander—Dr. J. B. Watts, Taylorsville. There have been seven cases of typhoid fever reported during the last month; it was of very

mild type. Measles prevails in epidemic form in certain parts of the county. Dysentery has prevailed very extensively. The sanitary condition of the county is only tolerably good; that of the public buildings is about as last reported.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Ashe—No Board of Health.

Beaufort—Dr. W. A. Blount, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No Board of Health.

Buncombe—Dr. H. C. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. No report.

Cabarrus—Dr. R. S. Young, Concord. The sanitary condition of the county has been good; also that of the public buildings.

Caldwell—Dr. A. A. Kent, Lenoir. There have been two cases of typhoid fever reported. There have also been a few cases of dysentery and cholera-morbus, but generally the health of the county has been good for the season of the year. The sanitary condition of the public buildings is fairly good; no efforts at improvement.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead. Measles has been reported. The sanitary condition of the county is good; also that of the public buildings.

Caswell—Dr. R. H. Williamson, Yanceyville. Dysentery and malarial fever have prevailed. The sanitary condition of the county is good; that of the public buildings is also good.

Catawba—Dr. J. H. McCorkle, Newton; Dr. J. C. Whiteside, acting. Typhoid fever, whooping-cough and measles have prevailed in some portions of the county. The general sanitary

condition of the county and poor-house is good; that of the jail is as good as could be expected. The jail is being enlarged.

Chatham—Dr. H. T. Chapin, Pittsboro. Dysentery has prevailed in some sections of the county. Hog cholera in one section. The sanitary condition of the county is very good; also that of the public buildings.

Cherokee—Dr. J. F. Abernathy, Murphy. The health of this county is indeed fair; no epidemics to my knowledge. There is no effort to improve the public buildings, except the erection of a new court-house. The jail is more cleanly kept at present.

Chowan—No Superintendent of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. Typhoid fever and dysentery have prevailed in different portions of the county. The sanitary condition of the county is good; also that of the public buildings.

Columbus—Dr. I. Jackson, Whiteville. There have been ten cases of typhoid fever reported. The sanitary condition of the county is fairly good. We are having more typhoid fever than usual; it has been the prevailing disease, and outside of that there has been but little sickness of a climatic character. The sanitary condition of the public buildings is good.

Craven—Dr. Leinster Duffy, New Bern. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county is good; that of the public buildings tolerably good; no efforts at improvement.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Whooping-cough and measles have prevailed in scattered portions of the county. The sanitary condition of the county and the public buildings is unchanged since last report.

Duplin—Dr. J. W. Blount, Kenansville. Dysentery and diarrhoea have prevailed during the month of June. There have been some

cases of malarial, intermittent and remittent fevers, and a few cases of mumps. The sanitary condition of the public buildings is good, and there has been no sickness among the inmates except a few cases of the prevailing disease.

Durham—Dr. N. M. Johnson, Durham. The sanitary condition of the county for the month of June has been good, there being no epidemic save measles. The condition of the public buildings is healthful. Houses for the paupers and prisoners are being erected of brick.

Edgecombe—Dr. Donald Williams, Tarboro. There have been reported five cases of measles. Diarrhoeal diseases have prevailed in some sections of the county. The sanitary condition of the county and public buildings is good.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. As far as I can learn, the sanitary condition of the county is very good. There have been several cases of typhoid and typho-malarial fevers, but not much besides. The sanitary condition of the public buildings is very good; improvements made as demanded.

Gaston—Dr. E. B. Holland, Dallas. The sanitary condition of the county is good. There have been cases of typhoid fever, typhoid pneumonia and bowel complaints among teething children. The sanitary condition of the public buildings is first-class.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. J. M. Hays, Oxford. The health of our county at this time is unusually good.

Greene—Dr. E. H. Sugg, Snow Hill. Malarial fever has prevailed with a few cases of typhoid fever, *La Grippe* and dysentery. The general sanitary condition of the county and public buildings is good.

Guilford—Dr. E. R. Michaux, Greensboro. The sanitary condition of the town and county is first-rate; very little sickness. A few cases

of bowel trouble and some little malarial fever. The sanitary condition of the public buildings is good as respects the jail—no effort being made towards improvement in that quarter; but I am indeed happy to state that the Commissioners have ordered the erection at the poor-house of a house for the care of the *incurable insane*, a thing most truly needed.

Halifax—Dr. A. B. Pearce, Weldon. Dysentery and infantile diarrhoea have prevailed in many sections of the county. The sanitary condition of the county has been good, only the diseases peculiar to this season have prevailed. No improvement in the condition of the public buildings since last report. Jail remarkably free from disease. Poor-house filled with disease of all grades and forms incident to poverty, filth and bad morals.

Harnett—No Board of Health.

Haywood—Dr. R. L. Allen, Waynesville. No report.

Henderson—Dr. W. B. Reese, Hendersonville. No report.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. Measles has been epidemic, and there have occurred a few cases of whooping-cough and three of typhoid fever. The sanitary condition of the county was good. The above, with malarial fever, dysentery, diarrhoea and cholera-morbus and infantum, have been the prevailing diseases. Nothing is being done looking to the improvement of the sanitary condition of the public buildings; they are in their usual condition. Our jail cannot truthfully be called a comfortable summer resort.

Jackson—Dr. J. L. Candler, Dillsboro. The general health of the county has been some better than for May. Entirely free from the the usual epidemics. An average amount of rain and even temperature.

Johnston—Dr. L. L. Sasser, Smithfield. Malaria and gastro-intestinal troubles have prevailed. There have been reported ten cases of measles, eight of whooping-cough and one of

typhoid fever. The sanitary condition of the county and public buildings is good.

Jones—No Board of Health.

Lenoir—No Board of Health.

Lincoln—Dr. W. L. Crouse, Lincolnton. Measles and whooping-cough have prevailed in and around Lincolnton. The health of the county has been very good until the last few weeks. We have had dysentery among the children, and there have occurred a few cases of typhoid fever. The sanitary condition of the public buildings is good. All the public buildings are sufficient for the demands made upon them. The sick of each should be allowed more money, that they might be better fed.

Macon—Dr. J. M. Lyle, Franklin. The sanitary condition of the county is very good; no epidemic except *La Grippe*. The sanitary condition of the public buildings is good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. Dysentery and diarrhoea have prevailed in several portions. There have been some typhoid and malarial fever reported. Unofficial reports of scarlatina come from the upper part of the county. The sanitary condition of the public buildings is good.

McDowell—Dr. J. H. Gilkey, Marion. The sanitary condition of the county and public buildings is good. Diarrhoea, dysentery and cholera-infantum have prevailed extensively in town and country, but have had little other sickness.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. Summer diarrhoea has prevailed in nearly all portions of the county. There have been reported two cases of measles, two of whooping-cough and one of typhoid fever. There is now considerable sickness in the western part of the county. The sanitary condition of the jail and poor-house is good. The keepers are doing their best to keep them in a sanitary condition.

Montgomery—Dr. F. E. Asbury, Asbury. There have been reported five cases of typhoid

fever. The sanitary condition of the county is very good at this time. We are now taking steps to improve the condition of the jail. We wish to increase the ventilation, although the health of the inmates is good.

Moore—Dr. Gilbert McLeod, Carthage. No report.

Nash—Dr. G. W. Lewis, Springhope. Dysentery and remittent fever have prevailed in different portions of the county. Hog cholera has been epidemic in the southern part of the county. The general sanitary condition of the county is good. Except the above, we have had no sickness during the month. Jail and poor-house are in good condition. Our Commissioners are making some improvements at the poor-house in the way of new buildings.

New Hanover—Dr. F. W. Potter, Wilmington. There have been reported four cases of measles, fourteen of whooping-cough, one of diphtheria, nine of typhoid fever and one of pernicious malarial fever. Bowel complaints have prevailed in nearly all portions of the county. There is a good deal of malarial fever in the county, especially on or near the sea-shore. I fear that unless the poor-house and house of correction can be kept dry, sickness will result. As a vast amount of excavating had to be done for a foundation for these buildings, in heavy rains water sometimes oozes up. There is not much sickness now, nor (I am glad to say) has there been during the month. I mentioned to the authorities dangers that might arise if not properly drained, and an effort was made to reach that end; but after heavy rains I notice the water oozes through the cement covering the lower floor or basement of the poor-house. Mr. Bagg was notified of the fact before the contractor, Mr. Allen, left the city. The hospital has no room fitted up for medicines, etc. Mr. Bagg was also notified of that fact in time, and I have no doubt was assured by the contractor that it would all be attended to. The two cisterns connected with the poor-house are built to contain two hundred barrels each, but, according to my calculations, they do not hold so much.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—No Board of Health.

Orange—Dr. D. C. Paris, Hillsboro. There have been some cases of measles. Dysentery and diarrhoea have prevailed in all portions. *La Grippe*, typho-malarial fever, together with the above named diseases, have prevailed. Otherwise, the sanitary condition of the county has been good. That of the public buildings is fairly good. I have to report a case of triplets born to a colored couple. There were three normal placentæ, and the births seem to have been normal. All did well for ten days, when one of the infants died, evidently from the lack of hygiene.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. Cholera has been epidemic among hogs. There is a gradual improvement in the county in the application of sanitary measures. June has been dry and hot, but the general health of the county has been fairly good. Malarial and typhoid fevers have prevailed to some extent, but not of a high type. Bowel diseases of children unusually severe, with some fatality. Cerebro-spinal meningitis has extensively prevailed, and has been very fatal.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. No report.

Polk—Dr. Henry Shankle, Mills' Spring. No report.

Randolph—Dr. J. W. Long, Randleman. Whooping-cough and dysentery have been abundant. There have been reported twenty-nine cases of measles, seven of typhoid fever, two of diphtheria, ten of cholera morbus and infantum and two of pernicious malarial fever, though I doubt these last. There has been cholera and distemper among the domestic animals. The sanitary condition of the jail is good; that of the poor-house is tolerably good.

Richmond—Dr. J. M. Covington, Rocking-

ham. I have to report thirty-six cases of whooping-cough, seven of measles and four of typhoid fever, as well as dysentery of a mild type. The sanitary condition of the county is as good as usual; that of the public buildings, except the jail, is good also.

Robeson—Dr. R. F. Lewis, Lumberton. Measles has prevailed in some sections, and I also have to report some typhoid fever. The sanitary condition of the county is very fair; also that of the public buildings. The contract has been given for the improvement of the court-house.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. Measles, whooping-cough and typhoid fever have prevailed in Salisbury and other portions of the county. The sanitary condition of the county is fairly good; no epidemic since the *Grippe*, and mild epidemics of whooping-cough and measles. There are some summer bowel diseases, especially among the children who had or have whooping-cough or measles. The sanitary condition of the public buildings is fairly good.

Rutherford—Dr. W. A. Thompson, Cliffdale. There have been two cases of typhoid fever, both fatal. There may have been others, but these are the only ones heard of. Cholera among hogs and pink-eye among horses have been epidemic. The sanitary condition of the county is very good, as we have natural drainage. That of the public buildings is not as good as it should be.

Sampson—Dr. J. A. Stevens, Clinton. The sanitary condition of the county is fair. Measles, whooping-cough, diarrhoea, dysentery and malarial fevers are the prevalent diseases. I have seen also three cases of typhoid fever this month. The sanitary condition of the jail is not as good as it should be, but the Sheriff has promised me to have it attended to. Our poor-house is well kept, and its sanitary condition excellent.

Stanly—Dr. D. P. Whitley, Plyler. No report.

Stokes—Dr. W. V. McAules, Danbury. No report.

Surry—No Board of Health.

Swain—No Board of Health.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. Mumps has prevailed in this township. One case of typhoid fever has been reported. There has been an epidemic of hog cholera. The sanitary condition of the county is very good; that of the public buildings is bad; no efforts to improve it.

Union—Dr. W. C. Ramsay, Monroe. The sanitary condition of the county is generally fair. There is diarrhoea in most sections of the county, and two cases of typhoid fever have been reported. The sanitary condition of the poor-house is good; that of the jail bad.

Vance—Dr. A. Cheatham, Henderson. Measles, diarrhoea and dysentery have been quite prevalent. The sanitary condition of the public buildings is good.

Wake—Dr. James McKee, Raleigh. There have been reported three cases of diphtheria and two of typhoid fever. The sanitary condition of the county is excellent; no epidemics of any kind during the past month. The sanitary condition of all the public buildings is very good.

Warren—Dr. J. P. Macon, Warrenton. Dysentery, whooping-cough and measles have prevailed in all sections. The sanitary inspector visits each premises twice each month.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. Some fifty or more cases of measles and

whooping-cough have occurred. These have prevailed in all portions of the county. The sanitary condition of the county is good in every way; also that of the public buildings. The new jail is in good order, with all the modern improvements. The poor-house first-class and well kept.

Wayne—Dr. John Spicer, Goldsboro. Measles and whooping-cough have prevailed in some portions of the county. Diarrhoeal disorders have also been prevalent. Sanitary condition of the county is good; also that of the public buildings.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. Dysentery is reported as very severe in the Elm City and Black Creek sections. There have been three cases of typhoid fever reported, and malarial fevers are prevalent. Two cases of whooping-cough reported, but there is a great deal of this in the county. There has been very great improvement in sanitary condition at the poor-house. The jail is about the same as last month.

Yadkin—Dr. T. R. Harding, Yadkinville. I have to report typhoid fever in all parts of the county. Dysentery in mild form is pretty general. Sanitary condition of the public buildings about the same as for the two or three months past.

Yancey—Dr. J. L. Ray, Burnsville. Measles and whooping-cough have prevailed, and there has been reported one case of typhoid fever. The sanitary condition of the county is moderately good at present. The poor-house is not yet completed; preparation is being made to cover the jail.

Condition of Jails and Poor-houses by Counties for June, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	4	.....	.....	.....	40 ^a	.....	.....	.....
Alexander.....	0	.....	.....	.....	11	500	0	3
Alleghany.....	.....	.....	.....	.....	.....	.....	.....	.....
Anson.....	.....	.....	.....	.....	.....	.....	.....	.....
Ashe.....	.....	.....	.....	.....	.....	.....	.....	.....
Beaufort.....	.....	.....	.....	.....	.....	.....	.....	.....
Bertie.....	.....	.....	.....	.....	.....	.....	.....	.....
Bladen.....	.....	.....	.....	.....	.....	.....	.....	.....
Brunswick.....	.....	.....	.....	.....	.....	.....	.....	.....
Buncombe.....	.....	.....	.....	.....	.....	.....	.....	.....
Burke.....	.....	.....	.....	.....	.....	.....	.....	.....
Cabarrus.....	9	903	2	2	20	*	4	6
Caldwell.....	2	*	0	2	.....	.....	.....	.....
Camden.....	.....	.....	.....	.....	.....	.....	.....	.....
Carteret.....	0	.....	.....	.....	0	.....	.....	.....
Caswell.....	6	450	0	3	25	1,000	9	3
Catawba.....	6	600	2	4	22	900	4	5
Chatham.....	1	.....	.....	.....	27	.....	.....	.....
Cherokee.....	1	*	.....	.....	3	534	.....	.....
Chowan.....	.....	.....	.....	.....	.....	.....	.....	.....
Clay.....	.....	.....	.....	.....	.....	.....	.....	.....
Cleveland.....	11	684	.....	5	22	997	.....	6
Columbus.....	6	*	.....	4	10	*	.....	0
Craven.....	.....	.....	.....	.....	.....	.....	.....	.....
Cumberland.....	6	*	.....	.....	15	*	.....	.....
Currituck.....	.....	.....	.....	.....	.....	.....	.....	.....
Dare.....	.....	.....	.....	.....	.....	.....	.....	.....
Davidson.....	6	*	0	0	21	721	0	3
Davie.....	.....	.....	.....	.....	.....	.....	.....	.....
Duplin.....	0	.....	.....	.....	15	*	.....	.....
Durham.....	5	1,000	.....	1	35 ^b	1,000	.....	6
Edgecombe.....	6	*	1	1	23	*	3	2
Forsyth.....	.....	.....	.....	.....	.....	.....	.....	.....

* Air space exceeds one thousand cubic feet. (a) Includes 7 in house of correction. (b) Includes 17 in house of correction.

Condition of Jails and Poor-houses by Counties for June, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	4		4	2	20		20	2
Gaston.....	10				10			
Gates.....								
Graham.....								
Granville.....	2	*			22	818		
Greene.....					11	1,000		1
Guilford.....	13	960			28	*		
Halifax.....	7			3	47			7
Harnett.....								
Haywood.....								
Henderson.....								
Hertford.....								
Hyde.....								
Iredell.....	12				22			
Jackson.....								
Johnston.....	3	*	3	2	13	*	5	3
Jones.....								
Lenoir.....								
Lincoln.....	3	*	0	3	22	500		5
McDowell.....	3				6			
Macon.....	0				0			
Madison.....								
Martin.....	0				16	400	3	4
Mecklenburg.....								
Mitchell.....	5				6			
Montgomery.....	3	670	0	1	13	450	3	5
Moore.....								
Nash.....	1	*	0		30	800	7	5
New Hanover.....	12	600	6	6	20 α	1,000	15	7
Northampton.....								
Onslow.....								
Orange.....	5	512	0	2	28	*	12	10
Pamlico.....								

* Air space exceeds one thousand cubic feet.

 α . Includes 2 in house of correction.

Condition of Jails and Poor-houses by Counties for June, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	2				3			
Perquimans.....								
Person.....								
Pitt.....								
Polk.....								
Randolph.....	6	*	0	3	31	491	10	8
Richmond.....	8				6			
Robeson.....	9	768			10	720		
Rockingham.....								
Rowan.....	6	1,000	0	6	6	*	0	0
Rutherford.....	2	1,000		2	27	800		5
Sampson.....	2				19			
Stanly.....								
Stokes.....								
Surry.....								
Swain.....								
Transylvania.....								
Tyrrell.....	0				0			
Union.....	2				15			
Vance.....	6	*	2	2	15	*		
Wake.....	5	*			107a			
Warren.....	3	*	1		16	*	6	
Washington.....								
Watauga.....	5		4	3	7		7	0
Wayne.....	3	952	0	1	3	*	0	0
Wilkes.....								
Wilson.....	1	*	0	1	15	*	5	5
Yadkin.....	2			1	23			8
Yancey.....	5	460	0	4	0			

* Air space exceeds one thousand cubic feet.

a. Includes 44 in house of correction.

Mortuary Report for June, 1891.

TOWNS AND REPORTERS.	Races.	Population.		Temporary Annual death Rate per 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrhoeal Diseases.	All other Diseases.	Accid't & Violence.	Suicide.	Still-born.	Total		
		By Races	Total.	By Races	Tot.																	By Races.	Deaths	
Asheville.....	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. H. B. Weaver.....	Color'd	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charlotte.....	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. J. Scarr.....	Color'd	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Durham.....	White	4,500	7,500	10.0	9.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1	4	6	5
Dr. N. M. Johnson.....	Color'd	3,000	.....	8.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....
Fayetteville.....	White	2,800	.....	38.6	33.6	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	6	1	.....	.....	1	9	14	4
Dr. J. H. Marsh.....	Color'd	2,200	5,000	27.2	.....	1	1	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	5	.....	.....
Goldsboro.....	White	2,800	.....	12.9	14.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	3	6	.....
Dr. John Spicer.....	Color'd	2,200	5,000	16.4	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	3	.....	.....
Henderson.....	White	2,256	.....	10.6	28.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	2	10	8
Dr. A. Cheatham.....	Color'd	2,000	4,256	48.0	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	4	1	.....	.....	.....	8	.....	.....
Newbern.....	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S. Fulcher, City Cl'k	Color'd	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oxford.....	White	1,700	3,300	0.0	8.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....
Dr. J. M. Hays.....	Color'd	1,600	.....	7.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Raleigh.....	White	8,000	15,000	35.7	28.8	1	.....	2	.....	.....	.....	.....	1	1	.....	.....	7	8	0	.....	3	23	36	24
Dr. Jas. McKee.....	Color'd	7,000	.....	22.3	.....	1	.....	.....	.....	.....	.....	.....	1	1	.....	.....	4	4	1	.....	.....	13	.....	.....
Salisbury.....	White	2,850	4,500	25.2	29.3	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	11	3
Dr. J. J. Summerell.....	Color'd	1,650	.....	36.3	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Tarboro.....	White	1,258	2,370	0.0	10.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....
Dr. D. Williams.....	Color'd	1,112	.....	21.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	0	2
Warrenton.....	White	1,050	.....	0.0	6.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....
Dr. P. J. Macon.....	Color'd	950	2,000	12.6	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1
Wilmington.....	White	9,000	21,000	20.0	26.9	1	.....	1	.....	.....	1	2	.....	2	.....	2	2	5	3	1	.....	15	47	29
Dr. F. W. Potter.....	Color'd	12,000	.....	32.0	.....	.....	.....	.....	.....	.....	.....	3	.....	2	2	4	4	11	1	.....	2	32	.....	.....
Greensboro.....	White	4,000	6,000	6.0	6.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....
Dr. E. R. Michaux.....	Color'd	2,000	.....	6.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	3	.....
Statesville.....	White	2,000	2,500	6.0	4.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	1
Dr. M. W. Hill.....	Color'd	500	.....	0.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....
Wilson.....	White	2,000	3,500	12.0	20.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	2	6	1
Dr. A. Anderson.....	Color'd	1,500	.....	32.0	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	4	.....	.....
Hillsboro.....	White	600	.....	20.0	12.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....
Dr. D. C. Parris.....	Color'd	400	1,000	0.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	1	.....
Monroe.....	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. W. C. Ramsay.....	Color'd	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salem—S. W. Clinard, City Clerk.....	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Color'd	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Meteorological Summary for North Carolina, June, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.
H. B. BATTLE, PH. D., Director. C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).									Mean Humidity.	Total Precipitation.	No. OF DAYS					Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range			Cloudless.	Partly Cloudy.	Cloudy.	Rainy.		
Asheville.....	71.7	89	26	82.6	50	5	60.5	39	22.0	59.6	2.75	16	6	8	14	N. & N.W.	
Bakersville.....	67.6	86	18	78.4	42	2	56.4	44	22.0	71.2	2.66	12	13	3	9	E.	
Charlotte.....	76.6	95	26	86.6	56	8	66.5	39	20.1	78.4	3.77	10	13	7	14	S. W.	
Chapel Hill.....	77.5	99	26	90.6	55	9	64.5	44	26.1	.....	4.61	.....	.....	11	.....	.....
Douglas.	76.5	98	26	92.0	50	4	61.0	48	31.0	.....	4.00	16	10	4	10	S. W.
Franklin.....	70.2	90	26	84.2	42	2	56.1	48	28.1	.....	1.40	11	3	16	8	S.
Hendersonville.....	71.7	86	26	77.2	59	9	67.8	27	9.4	84.9	3.50	5	7	15	9	W.	
Kitty Hawk.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Littleton	73.4	94	26	84.2	52	27	62.7	42	21.5	.....	3.57	8	10	12	14	N. E.
Lexington	75.2	97	26	86.8	51	9	63.6	46	23.2	80.6	2.57	10	12	8	11	N. E.	
Lenoir.....	73.3	90	26	80.3	58	8	67.7	32	12.6	.....	3.20	.....	.....	9	.....	.....
Morganton.....	73.2	95	26	81.7	58	9	67.3	37	14.4	74.0	2.41	.....	.....	14	.....	.....
Mount Airy.....	72.5	92	26	85.3	50	1	59.7	42	25.6	.....	2.66	13	8	9	8	S. W.
Oak Ridge.....	74.8	93	17	85.3	54	8	64.2	39	21.1	.....	2.77	11	10	9	15	S. W.
Pittsboro	73.4	93	16	84.3	52	11	62.5	41	21.8	.....	3.60	13	9	8	5	S.
Raleigh	75.7	95	17	85.6	55	1	65.8	40	19.8	76.2	4.12	13	10	7	12	N. E.	
Southport	77.0	92	27	83.4	62	9	70.6	30	12.8	.....	4.35	11	15	4	12	S. W.
Southern Pines.....	77.8	98	17	91.1	55	1	64.5	43	26.6	.....	3.70	10	14	4	11	S.
Salisbury	78.2	94	26	85.1	61	8	71.2	33	13.9	.....	5.20	.....	.....	13	.....	.....
Weldon	75.1	96	18	85.6	55	6	64.7	41	20.9	.....	4.19	10	7	13	10	N.
Washington ..	77.6	96	26	88.3	59	1	67.0	37	21.3	78.4	4.01	15	11	4	12	N. E.	
Wilmington..	77.2	95	27	85.5	60	1	68.8	35	16.7	80.6	3.47	9	18	3	17	S.	

STATE METEOROLOGICAL SUMMARY FOR JUNE, 1891.

From the N. C. State Weather Service.

Mean Barometer 29.98 inches; normal for June 30.02.

Highest Barometer 30.28 inches on the 8th at Lynchburg, Va.

Lowest Barometer 29.63 inches on the 18th at Raleigh.

Mean temperature 75.4 degrees; normal for June 74.9 degrees.

Highest temperature 102 on the 17th at Cheraw, S. C.

Lowest temperature 42 on the 2d at Franklin.

Average rain-fall 3.39 inches; normal for June 4.64 inches.

Greatest monthly rain-fall 7.58 inches at Chattanooga, Tenn.

Least monthly rain-fall 1.40 inches at Franklin.

Average number of cloudless days 11.

Average number of partly cloudy days 11.

Average number of cloudy days 8.

Average number of rainy days 11.

Prevailing wind direction, South-west; average hourly velocity 5.5 miles per hour.

Prevailing direction from many years' observations, South-west; average hourly velocity 7.3 miles.

The month was warmer and drier than usual and was favorable for growth of crops.

ELISHA MITCHELL SCIENTIFIC SOCIETY.
CHAPEL HILL, N. C.

BULLETIN
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J. A. HODGES, M. D., Fayetteville.

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THOMAS F. WOOD, M. D., *Secretary and Treasurer*, Wilmington.

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VOL. VI.

AUGUST, 1891.

NO. 5.

AT THE conjoint session of the Medical Society of North Carolina with the North Carolina Board of Health, held in Asheville on the 27th of May, an election of members of the Board was held to fill the vacancies caused by the expiration of the terms of Drs. Thomas F. Wood and W. D. Hilliard. The ballot resulted in the reelection of Dr. Wood and the election of Dr. S. Westray Battle of Asheville, each for a term of six years.

At a meeting of the Board, Dr. Thomas F. Wood was re-elected Secretary and Treasurer for a term of six years.

A communication from the Governor announces the reappointment of Dr. J. H. Tucker, of Henderson; Mr. J. L. Ludlow, C. E., Winston, and Prof. F. P. Venable, Chapel Hill, as members of the State Board of Health for a term of two years.

FOR THE BULLETIN.

Typhoid Fever in the State.

The reports this month from the County Superintendents of Health show typhoid fever to have been unusually prevalent during the

month of July. There were reports received from fifty-one counties this month, and of these thirty-four reported typhoid fever. In several counties it seems to have prevailed to such an extent as to be epidemic. Notice the language of some of the reporters.

Dr. J. B. Watts, of Alexander: "Typhoid fever has prevailed in all sections of the county; about thirty cases reported."

Dr. J. F. Abernathy, of Cherokee: "There were reported about forty-two to forty-five cases of typhoid fever during the month of July, with four deaths. The fever is still spreading, despite all antiseptic and hygienic precautions. It seems confined to the small water-courses."

Dr. O. P. Gardner, of Cleveland: "Typhoid fever has prevailed in many portions."

Dr. I. Jackson, of Columbus: "We have had more typhoid fever than usual."

Dr. E. S. Foster, of Franklin: "Typhoid and typho-malarial fevers have prevailed during the summer in most sections of the county."

Dr. J. L. Nicholson, of Onslow: "Many cases of typho-malarial fever reported." (Those under his care responded to Ehrlich's test for typhoid.)

Dr. B. T. Cox, of Pitt: "Typhoid and malarial fevers have prevailed in many portions of the county, being virulent among the colored population."

Dr. J. W. Long, of Randolph: "Typhoid fever has prevailed pretty extensively around Randleman."

Dr. D. P. Whitley, of Stanly: "Typhoid and malarial fevers have prevailed in various parts of the county; there have been eight cases in my practice."

Dr. W. V. McCauley, of Stokes: "Dysentery has subsided and typhoid fever seems to have taken its place, and has been raging in a very malignant form in the southern portions of the county."

Dr. W. C. Ramsay, of Union: "This (typhoid) is the only disease that has prevailed to any extent."

Dr. T. R. Harding, of Yadkin: "Typhoid fever has prevailed in nearly all portions of the county; about fifty cases reported."

Dr. T. R. Harding, in reply to special letter, makes the following report:

YADKINVILLE, N. C., July 11, 1891.

THOMAS F. WOOD, M. D., *Wilmington*.

In my opinion the disease is epidemic. It commenced about May. Mortality more than usual. It is on the increase. Several cases occur in each family. Water supply is generally well-water.

I think that disinfectants and sanitary precautions put a stop to the spread of disease. In certain localities the rain-fall has been very great, and I think that the disease is worse in these than where the rain-fall is less. There is a great neglect among our people to keep their wells in good condition, disinfect privies, pig-styes, etc.

Will write you again in a few days. Would be glad to have one of your Board visit us; but think it would be useless unless you could prevail on the physicians and people to use more disinfectants, as we have a very rugged country, with a great deal of superstition and ignorance among the people.

Respectfully,

T. R. HARDING,
Supt. of Health.

The following is a copy of a second letter received from Dr. Harding a few days later. It is a little more extended report, and gives the answers of two physicians in the country to letters of inquiry sent them by Dr. Harding:

THOMAS F. WOOD, M. D., *Wilmington*.

Dear Sir: Yours of the 11th inst. to hand. In reply will say that when I received yours of the 8th I immediately wrote to all the physicians in the county, ten in all, but as yet have only received two replies.

In answer to your questions of 11th will say:

1. The duration of disease is from fourteen to thirty-five days.

2. It does not, in all particulars, follow the description given in text-books

3. We have the rose-colored eruption in about one-fourth of the cases; some of them in great numbers.

4. We have diarrhoea in about one-half the cases, and in some of them tenesmus.

5. The enlargement of the spleen is not a prominent symptom, but in a few cases it is very marked, with great pain in the region of the spleen.

6. We have stupor and delirium in about one-tenth of the cases, also severe rigors in a few cases.

7. About one in ten die.

8. Simultaneous in several localities, varying from four to ten miles.

9. I do not think that I could class it as contagious, yet it seemed to be transmitted to other members of the same family; but I attribute this to want of proper disinfection, it being almost impossible to have the stools, in bad cases, disinfected. Our people have never been taught the laws of hygiene and sanitation.

10. I think the local cause, if any, is from cellars, etc. We had a great deal of rain last spring, then just before the fever set in we had a three-weeks drouth. I have found cellars in most of the homes where the fever has occurred.

My theory is that the epidemic is caused by the heavy rains washing into wells and springs filth from former cases, or the cellars getting water into them and then drying.

About eighteen months ago I had nine cases of fever in one family, when there was not

another case in the county. Under this house was a cellar that had been first wet and then dry for some time, and contained debris of various kinds.

As far as any investigation that I can make, I shall make no charge for it, as I feel it a duty I owe to my neighbors. I send you the replies that I have received from the physicians.

I have had no new case in six days; have now under treatment ten cases, and have had about thirty cases since May 20th, with only two deaths so far.

If you could make any suggestion from the history I write you for a course to follow, I would be glad to have it.

Yours respectfully,

T. R. HARDING.

JONESVILLE, N. C., Aug. 12, 1891.

Dr. Harding: In reply to your note of yesterday, I will say that I have had only three cases of typhoid fever; one of these came from Winston sick; one, my son, who came from Asheville sick, and the other lives in Wilkes County, five miles from Jonesville. The last case, I think, is a sporadic case, as there is no other case in the neighborhood. I have been called in cases in consultation in Wilkes, above Trap Hill, where I think the disease prevails as an epidemic. We have a fever here we do not consider typhoid, lasting only about two weeks; we call it "mongrel fever," as the type is not fully defined. The cases I have had so far have yielded nicely to treatment. I have used no disinfectants yet, but should if the disease prove an epidemic or contagious.

Yours, etc.,

L. J. BAKER.

CROSS-ROADS CHURCH, Aug. 13, 1891.

DR. T. R. HARDING, *Yadkinville*.

SIR: Your letter of inquiry to hand. In reply I would say I have eight cases that are generally diagnosed as cases of typhoid fever, though they do not fill the bill of true typical cases of typhoid fever, but rather that of *typho-malarial fever*.

When I think necessary I use disinfectants. All my cases, with one or two exceptions, use, or have been using, more or less water from

the same well. I have advised and insisted on cleaning out and around the well, but it has not been done as yet. There are, or have been, two cases in three families around this well. The disease, outside of complications, has been, up to date, a comparatively mild variety. The families generally that are sick have neither pig-pens nor cow-pens, consequently I don't disinfect. I have advised thorough cleaning around houses, springs, pens, etc.

Yours very respectfully,

W. S. WINDSOR, M. D.

This last letter would show very conclusively that the well is at fault, as six of his cases occurred in three families around the well, and it would have been the proper course to have had the well not cleaned but *closed*, for if the water be contaminated cleaning would hardly free it from the contamination. The family should be made to thoroughly disinfect every stool in cases of "*typho-malarial*," as well as plain typhoid fever, and the vessels should be emptied at such a distance from any source of water-supply that there can be no possible danger of its contaminating the drinking-water. Physicians cannot be too particular or too rigid in requiring their patients to carry out these safeguards, and he who neglects them is not faithful to the position he holds of physician and protector of the public health.

Dr. Parker said in his letter he would use disinfectants if the disease becomes *epidemic*. This is the way it is the world over—wait until the horse is stolen to lock the stable-door. Why, the very idea of disinfectants is that they should be used in the early cases, and so *prevent an epidemic*.

The disease seems to be epidemic in so many localities that the State Board is not financially able to send a committee into each district to search out the cause and character of the epidemic, but must depend on the Superintendent of Health in those counties where it is epidemic, to investigate the matter, as far as they can, and make a report to this office. They can follow the line laid down in Dr. Harding's report.

As in the vast majority of cases where the cause of an epidemic of typhoid fever has been scientifically traced out, the contagion was found in the water used by the sufferers, we would urge upon the physicians, in those districts where the disease is common, the importance of having the drinking-water, especially that from wells, boiled before being used. It can afterwards be readily cooled to the temperature of the other water, and can be aerated by pouring a few times from one vessel to another.

Summary of Vital Statistics for July, 1891.

(ELEVEN TOWNS.)

	White.	Col'd.	Total.
Aggregate population.	39,808	39,562	73,370
Aggregate deaths.....	61	69	130
Temporary annual death- rate per 1,000.....	18.4	24.6	21.2
Deaths under 5 years old,			40
<i>Causes of death.</i>			
Typhoid fever	4	1	5
Malarial fever.....	2	1	3
Whooping-cough	1	0	1
Pneumonia	0	2	2
Consumption.....	5	6	11
Brain diseases.....	2	3	5
Heart diseases.....	6	5	11
Neurotic diseases....	2	3	5
Diarrhoeal diseases...	12	20	32
All other diseases....	24	23	47
Accident and violence	1	2	3
Still-born.....	2	3	5
	61	69	130

Review of Diseases for July, 1891

Bronchitis — From Wayne.

Bilious Fever — From Randolph.

Chicken Cholera — From Orange and Pender.

Cholera-infantum — From McDowell, Sampson, Stanly and Wilson — 4 counties.

Cholera-morbus — From Iredell and Stanly.

Consumption — From Caswell.

Croup — From Randolph.

Diarrhœa — From Craven, Orange, Pitt, Randolph, Sampson, Stanly, Vance and Wilson — 8 counties.

Diphtheria — From Richmond.

Distemper — From Alexander and McDowell.

Dysentery — From Greene, Halifax, Pitt, Randolph, Sampson, Warren and Wilson — 7 counties.

Cholera (hogs) — From Davidson, Duplin, Jackson, Moore, Pender, Robeson, Sampson and Wilson — 8 counties.

Insanity — From Randolph.

La Grippe — From Orange and Warren.

Malarial Fever — From Alamance, Caswell, Craven, Duplin, Edgecombe, Gaston, Greene, Guilford, Halifax, Iredell, Johnston, Nash, New Hanover, Onslow, Orange, Pitt, Richmond, Sampson, Stanly, Warren, Wayne and Wilson — 22 counties.

Malarial Fever (hæmorrhagic) — From Montgomery.

Malarial Fever (pernicious) — From Randolph.

Measles — From Camden, Cleveland, Davidson, Lincoln, Onslow, Orange, Richmond, Sampson, Vance, Wake and Warren — 11 counties.

Pink-Eye (horses) — From Durham.

Pneumonia — From Iredell and Orange.

Rheumatism — From Caswell.

Tonsilitis — From Randolph.

Typhoid Fever — From Alamance, Alexander, Caldwell, Catawba, Chatham, Cherokee, Cleveland, Columbus, Duplin, Franklin, Gaston, Greene, Iredell, Johnson, Lincoln, Macon, McDowell, Montgomery, Nash, New Hanover, Onslow, Orange, Pitt, Randolph, Richmond, Sampson, Stanly, Stokes, Union, Vance, Wake, Warren, Yadkin and Yancey — 34 counties.

Typho-malarial Fever — From Franklin, Onslow and Orange.

Whooping-Cough — From Catawba, Davidson, Iredell, Lincoln, Nash, New Hanover, Richmond, Sampson, Warren, Watauga, Yadkin and Yancey — 12 counties.

Summary of Reports from County Superintendents of Health for July, 1891.

Alamance—Dr. G. W. Long, Graham. Malarial fevers have prevailed to a limited extent, with a few cases of typhoid. The sanitary condition of the public buildings is fairly good.

Alexander—Dr. J. B. Watts, Taylorsville. Typhoid fever has prevailed in all sections of the county, about thirty cases being reported. The sanitary condition of the county is very good. There has been an epidemic of distemper among horses. The sanitary condition of the public buildings is not very good, although it is about as good as usual, and I am sorry to say there are no efforts at improvement.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Beaufort—Dr. W. A. Blount, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. No report.

Cabarrus—Dr. R. S. Young, Concord. There have been reported twelve cases of typhoid fever. The sanitary condition of the public buildings is good.

Caldwell—Dr. A. A. Kent, Lenoir. The general health of the county is good. There have occurred a few cases of typhoid fever of a mild type; eight cases reported. The sanitary condition of the public buildings is good.

Camden—Dr. M. F. Arendell, Morehead City. The general sanitary condition of the county is good. Measles has occurred. The public buildings are old but comfortable.

Caswell—Dr. R. H. Williamson, Yanceyville. Remittent fever, rheumatism and a few cases of consumption have prevailed. The

general sanitary condition of the county is good. Also that of the public buildings.

Catawba—Dr. J. M. McCorkle, Newton; Dr. J. C. Whiteside, acting. The sanitary condition of the county is good. Typhoid fever and whooping-cough have prevailed in some portions of the county. Sanitary condition of the poor-house is good; that of the jail is as good as could be expected. The jail is being enlarged.

Chatham—Dr. H. T. Chapin, Pittsboro. The sanitary condition of the county is good. There has been a great amount of rain during the month. There have been reported ten cases of typhoid fever. The public buildings are in good sanitary condition.

Cherokee—Dr. J. F. Abernathy, Murphy. There were reported about forty-two or forty-five cases of typhoid fever during the month of July, with four deaths. The fever is still spreading, despite all antiseptic and hygienic precautions. It seems confined to the small water-courses in the county. The sanitary condition of the public buildings is very good at present; there is no sickness among the inmates.

Chowan—No report.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. The sanitary condition of the county is good. Typhoid fever has prevailed in many portions. There has been also some measles. The sanitary condition of the public buildings is good.

Columbus—Dr. I. Jackson, Whiteville. The sanitary condition of the county is good. We have had more typhoid fever than usual; nine cases have been reported. The sanitary condition of the public buildings is very good.

Craven—Dr. Leinster Duffy, New Bern. Intermittent and malarial fevers have occurred. Bowel troubles have prevailed in the city and county. The sanitary condition of the county and the public buildings is good.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county is tolerably good. Also that of the public buildings.

Currituck—No Board of Health.

Dare — No Board of Health.

Davidson — Dr. R. L. Payne, Lexington. Whooping-cough and measles have prevailed in scattered portions. The sanitary condition of the county is better than usual at this season of the year. There has been an epidemic of hog cholera. The condition of the poor-house is excellent. The jail (a large cage built inside of a large room) cannot be kept clean; allows inmates no room for exercise, and is altogether a disgrace to our civilization.

Davie — No Board of Health.

Duplin — Dr. J. W. Blount, Kenansville. There is a considerable amount of sickness in the county. The different types of malarial fever and several cases of typhoid fever. There has also been an epidemic of hog cholera. The sanitary condition of the public buildings is good, with very little sickness among the inmates.

Durham — Dr. N. M. Johnson, Durham. The amount of sickness in the county for July has been little; taking on the usual and accidental character. Pink-eye has prevailed to a slight extent among horses. The sanitary condition of the public buildings is good.

Edgecombe — Dr. Donald Williams, Tarboro. There has been rain nearly every day during July. Malaria has prevailed in some portions. The sanitary condition of the county is very good.

Forsyth — Dr. D. N. Dalton, Winston. No report.

Franklin — Dr. E. S. Foster, Louisburg. Typhoid and typho-malarial fevers have prevailed during the summer in most sections of the county. It has been generally of mild type, and little fatality. The sanitary condition of the public buildings is good, and such steps taken as are required to insure a healthful state at all times.

Gaston — Dr. E. B. Holland, Dallas. Typhoid and malarial fevers, with summer complaints among children, have prevailed. The sanitary condition of the public buildings is good.

Gates — No Board of Health.

Graham — No Board of Health.

Granville — Dr. J. M. Hays, Oxford. No report.

Greene — Dr. E. H. Sugg, Snow Hill. The sanitary condition of the county is, as usual, good. Malarial fever has prevailed, and several cases of typhoid fever and dysentery have occurred. The sanitary condition of the public buildings is good. No efforts at improvement.

Guilford — Dr. E. R. Michaux, Greensboro. The general health of the county is fairly good. Of course we have some simple malarial fever; but the majority of our fevers at this time are of the so-called "pig-pen" type, in which quinine seems to exert no influence whatever; not much serious sickness though. The sanitary condition of the public buildings was never better; but the jail is not in good condition as regards the privies, etc. There is no improvement, that I know of, except some at the poor-house.

Halifax — Dr. A. B. Pierce, Weldon. Malarial fevers and dysentery have prevailed. There has been a disease among hogs that has assumed no name; it seems to be a wasting of the muscles. The sanitary condition of the public buildings is good.

Harnett — No Board of Health.

Haywood — Dr. R. L. Allen, Waynesville. No report.

Henderson — Dr. W. B. Reese, Hendersonville. No report.

Hertford — No Board of Health.

Hyde — No Board of Health.

Iredell — Dr. M. W. Hill, Statesville. The sanitary condition of the county is good. Very little sickness of any kind; a few cases of typhoid and malarial fevers, measles, whooping-cough, cholera-morbus, etc.; pneumonia has also been reported. I have nothing different from last month to report in regard to the sanitary condition of the public buildings.

Jackson — Dr. J. M. Candler, Dillsboro. The sanitary condition of the county was never better; it is entirely free from epidemics; but there has been an epidemic of hog cholera. The sanitary condition of the public buildings is good.

Johnston — Dr. L. L. Sasser, Smithfield. Malarial troubles have prevailed, and there have been reported four cases of typhoid fever. The sanitary condition of the county and public buildings is good.

Jones — No Board of Health.

Lenoir — No Board of Health.

Lincoln — Dr. W. L. Crouse, Lincolnton. Whooping-cough, measles, and some typhoid fever, have prevailed. During the month of July there has been more sickness than usual at this season of the year. There has been one case of fever at the jail — the well has been cleaned and the jail overhauled and white-washed. No sickness at the poor-house.

Macon — Dr. J. M. Lyle, Franklin. The sanitary condition of the county is very good; one case of typhoid fever reported. The sanitary condition of the public buildings is also good.

Madison — No Board of Health.

Martin — Dr. W. H. Harrell, Williamston. No report.

McDowell — Dr. J. H. Gilkey, Marion. A few cases of typhoid fever, and a number of cholera-infantum, have prevailed in some portions. With these exceptions the health of the county has been good. There has been an epidemic of distemper among horses. The sanitary condition of the public buildings is good.

Mecklenburg — No Board of Health.

Mitchell — Dr. C. E. Smith, Bakersville. No report.

Montgomery — Dr. F. E. Asbury. There have been reported two cases of typhoid fever and six of hæmorrhagic malarial fever. The sanitary condition of the county is about as last reported. I cannot get the physicians to report; only one reported last month, and two this. As before stated, the jail is in bad sanitary condition, but there is talk of improvement. The poor-house is in good condition, there being no sickness there at present.

Moore — Dr. Gilbert McLeod, Carthage. The sanitary condition of the county is very good. There has been an epidemic of hog

cholera. Our public buildings are in good sanitary condition.

Nash — Dr. G. W. Lewis, Spring Hope. The sanitary condition of the county is good. Have had reported a few cases of typhoid fever and malarial fever, with several of whooping-cough. Jail and poor-house are in good condition.

New Hanover — Dr. F. W. Potter, Wilmington. Diarrhoeal troubles have subsided to some extent. Several cases of continued and a few of typhoid fever still exist in some parts of the county, especially on the sea-coast. Nine cases measles and four of whooping-cough reported. I have heard of few, if any, deaths. Jail is in good condition. The poor-house is kept in better condition than for some time past.

Northampton — Dr. H. W. Lewis, Jackson. No report.

Onslow — Dr. J. L. Nicholson, Richlands. Malarial fevers quite prevalent through the central section of the county. Many cases of typho-malarial fever reported; the few cases of this nature that have come under your reporter's care have shown themselves, by Ehrlich's test, to be typhoid fever. Measles has also been reported. The jail is in good condition; the poor-house the reverse, and no efforts at improvement.

Orange — Dr. D. C. Parris, Hillsboro. Owing to the long continued and excessive rain-fall during the month of July, together with intensely hot weather, our county is not in a healthy condition. Many of our people are prostrated by fevers and other diseases, attended with severe nervous prostration. One case of hemiplegia has occurred during the past three days, most probably from the debilitating state of the weather. Pneumonia and *La Grippe* have been complicating factors in our fevers. The lack of proper lighting and ventilation, and of proper disposal of human excrement at our county jail, render its sanitary condition anything but good. Typho-malarial fever is reported from the southern part of our county. Measles has been epidemic, and there have been reported two cases of typhoid fever. Remittent fevers and bowel troubles

have been prevalent in all sections of the county. There has been an epidemic of chicken cholera in the southern part of the county. The sanitary condition of the poor-house is moderately good; that of the jail not good; that of other public buildings good.

Pamlico — No Board of Health.

Pasquotank — No Board of Health.

Pender — Dr. S. S. Satchwell, Burgaw. While there is some improvement in the general sanitary condition of the county, the people are hard to arouse to the importance of sanitation, and the population of Pender are negligent of duty in this respect. The public at large need to be better educated in this respect. There has been an epidemic of cholera among hogs and chickens.

Perquimans — No Board of Health.

Person — No Board of Health.

Pitt — Dr. B. T. Cox, Redalia. Typhoid and malarial fevers have prevailed in many portions of the county, being virulent among the colored population. A few cases of diarrhoea and dysentery still linger. There has been more sickness the past month than in several since *La Grippe* ceased making its inroads upon the health of our people; not many deaths, though. The sanitary condition of the Home for the Aged has improved recently — considerable moral reform also. The jail is very comfortably kept.

Polk — Dr. Henry Shankle, Mills' Spring. No report.

Randolph — Dr. J. W. Long, Randleman. Pernicious malarial fever, acute diarrhoea, bilious fever, typhoid fever, chronic diarrhoea, dilatation of the heart, dysentery, insanity, typhlitis(?), acute gastritis, severe neuralgias, croup, tonsillitis, etc., have been reported. One doctor writes: "Fever and dropsy, caused by *La Grippe*, are the leading diseases. I have had eight cases of dropsy in one month." Typhoid fever has prevailed pretty extensively around Randleman. The mortality is low. The sanitary condition of the public buildings is fairly good. No serious sickness in the jail; in the poor-house have had four deaths.

Richmond — Dr. J. M. Covington, Rockingham. Malarial fevers of mild type have prevailed in some portions of the county. The sanitary condition of the county is good. There have been reported seven cases of measles, twelve of whooping-cough, two of diphtheria, and eight of typhoid fever. The sanitary condition of the public buildings is good.

Robeson — Dr. R. F. Lewis, Lumberton. The sanitary condition of the county is very fair — very little sickness in the county. There has been an epidemic of cholera among hogs. The sanitary condition of the public buildings is good.

Rockingham — No Board of Health.

Rowan — Dr. J. J. Summerell, Salisbury. No report.

Rutherford — Dr. W. Thompson, Cliffdale. No report.

Sampson — Dr. J. A. Stephens, Clinton. There has been an epidemic of hog cholera in the upper part of the county. Having waited and not heard from any other physician I report, from my own observation, typhoid and malarial fevers, whooping-cough, measles, diarrhoea, dysentery and cholera-infantum. We have had a great deal of sickness during the month. The sanitary condition of the jail is greatly improved since last report. It has had a thorough cleaning and whitewashing. The poor-house is in excellent sanitary condition.

Stanly — Dr. D. P. Whitley, Plyler. Typhoid and malarial fevers have prevailed in various parts of the county. There have been eight cases of typhoid fever in my practice. Diarrhoea has prevailed, and there have been a few cases of cholera-morbus and cholera-infantum. One case of femoral phlebitis, complicating typhoid fever, resulted favorably. The poor-house is in good condition and well kept. The poor are well fed. Our jail is a very poor one. There are good prospects of a new court-house next year.

Stokes — Dr. W. V. McAules, Danbury. Typhoid fever has prevailed in the southern part of the county. The sanitary condition of the county has been very good. Dysentery

has subsided, and typhoid fever seems to have taken its place, and has been raging in a very malignant form about the southern portions of the county. The sanitary condition of the public buildings has been fair.

Surry — No Board of Health.

Swain — No Board of Health.

Transylvania — No Board of Health.

Tyrrell — Dr. Ab. Alexander, Columbia. No report.

Union — Dr. W. C. Ramsay, Monroe. Typhoid fever has prevailed in some portions of the county, five cases being reported. This is the only disease that has prevailed to any extent during the past month. The sanitary condition of the poor-house is good; that of the jail bad.

Vance — Dr. A. Cheatham, Henderson. Diarrhœa has prevailed in some portions of the county. The sanitary condition of the county is good for this season of the year. Ten cases of measles and six of typhoid fever have been reported. The sanitary condition of the public buildings is good.

Wake — Dr. James McKee, Raleigh. The system of sanitary inspection as ordained by the Board of Aldermen is doing a vast deal of good, and is yet in its infancy. Four cases of typhoid fever and one of measles, have been reported in the city for the month. The measles was brought from Washington, D. C. The sanitary condition of the county is as good as could be expected, considering the great amount of rain-fall, swelling the streams and overflowing their banks.

Warren — Dr. P. J. Macon, Warrenton. There have been a few cases of measles and typhoid fever, and whooping-cough has been epidemic in the town. Remittent fevers have prevailed on the creeks. Dysentery and *La Grippe* have also prevailed. *La Grippe* has

made its second appearance in a very severe form. The sanitary condition of the public buildings is very good.

Washington — No Board of Health.

Watauga — Dr. W. B. Councill, Boone. Whooping-cough has prevailed in all portions of the county. The sanitary condition of the county is good in every way. No sickness of any note in the county during the past month, except whooping-cough among the children. The public buildings are in first-class condition.

Wayne — Dr. John Spicer, Goldsboro. The sanitary condition of the county is good. The diseases now common in the country are intermittent fever, remittent and continued fevers; also bronchitis, etc. Sanitary condition of the public buildings is good.

Wilkes — No Board of Health.

Wilson — Dr. Albert Anderson, Wilson. The prevailing diseases are malarial fevers, cholera-infantum, diarrhœa and dysentery. There is reported cholera among the domestic animals.

Yadkin — Dr. T. R. Harding, Yadkinville. Typhoid fever has prevailed in nearly all portions of the county. Whooping-cough has also been prevalent. The sanitary condition of the county is bad, but improving some. Since we have been having so much typhoid fever the physicians are using, and causing to be used, more disinfectants. About fifty cases of typhoid fever reported. The sanitary condition of the jail good; that of the poor-house only fair. Efforts are being made to improve it.

Yancey — Dr. J. L. Ray, Burnsville. Whooping-cough and measles have prevailed in some portions of the county. Four cases of typhoid fever reported. The sanitary condition of county is good. Poor-house is finished but no inmates yet. Jail will be re-covered soon.

Condition of Jails and Poor-houses by Counties for July, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	12 ^a				33			
Alexander.....	2	500	0	1	11	500	0	2
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....								
Cabarrus.....	12	920	3	1	20	*	4	6
Caldwell.....	3	980	1	3	7		1	2
Camden.....								
Carteret.....	0				0			
Caswell.....	8	400		3	23	1,000	9	3
Catawba.....	7	750	2	2	23	900	6	5
Chatham.....	2			1	27			12
Cherokee.....	2	*			5	840		
Chowan.....								
Clay.....								
Cleveland.....	16	684		2	27	997		2
Columbus.....					8	*		0
Craven.....	0				16	*	4	1
Cumberland.....	4				14			
Currituck.....								
Dare.....								
Davidson.....	4	*	0	0	23	721	0	3
Davie.....								
Duplin.....					15	*		
Durham.....	5	1,000		2	35 ^b	1,000		6
Edgecombe.....	6	*	2	3	24	*	3	4
Forsyth.....								

(a) Includes 7 in house of correction. *Space exceeds one thousand cubic feet. (b) Includes 18 in house of correction.

Condition of Jails and Poor-houses by Counties for July, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin	5			4	20			2
Gaston	13				12			
Gates								
Graham								
Granville								
Greene	2	500		1	11	1,000		1
Guilford	10	*			27	*		
Halifax	9			1	47			7
Harnett								
Haywood								
Henderson								
Hertford								
Hyde								
Iredell	5				22			
Jackson	2	200	1	1	4	200	2	2
Johnston	7	*	5	4	11	*	4	3
Jones								
Lenoir								
Lincoln	7	*		5	23	450		5
McDowell	3	550	2	2	5	600	1	1
Macon	3	*	0	1				
Madison								
Martin								
Mecklenburg								
Mitchell	9				4			
Montgomery	4				13			
Moore	5	*	0	1	7	*	0	3
Nash	2	*	0	1	30		7	7
New Hanover	14	600	10	9	22a	1,000	12	10
Northampton								
Onslow	2	*			3	*	1	1
Orange	4	512		2	29	*	12	15
Pamlico								

* Space exceeds one thousand cubic feet. a. Includes 3 in house of correction.

Condition of Jails and Poor-houses by Counties for July, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	2		1	2	4		2	1
Perquimans.....								
Person.....								
Pitt.....					19			1
Polk.....								
Randolph.....	7	960	0	3	29	525	10	9
Richmond.....	8				7			
Robeson.....	12	516			11	655		
Rockingham.....								
Rowan.....	7	1,000			15	*		
Rutherford.....								
Sampson.....	4				7			
Stanly.....	1	*	0	1	13	900	0	1
Stokes.....	1	600	0	0	11	500	2	4
Surry.....								
Swain.....	0				0			
Transylvania.....								
Tyrrell.....								
Union.....	7	*			15	*		1
Vance.....	5	*			14	*	4	5
Wake.....	10	*			110 ^a			
Warren.....	1	*	1	1	14	*	8	2
Washington.....								
Watauga.....	2				7			
Wayne.....	3	952	0	0	5	*	0	0
Wilkes.....								
Wilson.....	4	*	1	3	18	*	7	6
Yadkin.....	2		0	2	25		0	7
Yancey.....	5	460	2	4	0			

* Space exceeds one thousand cubic feet. a. Includes 47 in house of correction.

Mortuary Report for July, 1891.

[illegible]

Meteorological Summary for North Carolina, July, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).									Mean Humidity.	Total Precipitation.	NO. OF DAYS				Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range			Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	
Asheville.....	70.4	86	15	78.1	50	12	59.8	36	18.3	69.3	5.67	11	9	11	14	N. & N.W.
Bakersville.....																
Charlotte.....	74.7	90	15	84.1	55	12	65.3	35	18.8	79.0	3.79	5	12	14	14	E.
Chapel Hill.....	76.8	97	7	88.4	55	12	65.3	42	23.1		5.40				14	
Douglas.....	75.0	96	7	89.1	49	6	60.9	47	28.2		9.49				12	S. W.
Franklin.....	66.2	90	1	82.6	42	9	49.9	48	32.7		5.50	7	4	20	9	S.
Hendersonville.....	69.8	82	7	75.7	57	9	66.2	25	9.5	85.6	6.86	5	9	17	11	
Kitty Hawk.....	75.1	89	7	80.6	62	9	69.6	27	11.0		5.56	6	11	14	18	S. E. S. W.
Littleton.....	73.6	93	7	84.0	52	9	63.2	41	20.8		6.37	6	7	18	16	S. W.
Lexington.....	73.8	92	3	84.1	55	12	63.5	37	20.6	80.5	6.51	14	10	7	13	N. E.
Lenoir.....	72.0	84	15	78.3	58	10	65.8	26	12.5		7.30				10	
Morganton.....	74.4	88	3	80.9	61	12	67.8	27	13.1	77.1	4.61				13	
Mount Airy.....	73.1	88	7	84.3	48	6	61.9	40	22.4		5.47	8	12	11	9	S. W.
Oak Ridge.....	70.8	92	15	83.0	54	11	62.8	38	20.2	83.8	11.49	4	9	8	15	S. W.
Pittsboro.....	72.4	88	1	81.4	53	10	63.4	35	18.0		7.10	11	8	12	9	S.
Raleigh.....	74.0	90	15	82.7	55	9	65.4	35	17.3	82.2	10.99	5	11	15	19	S. W.
Southport.....	77.6	89	4	83.5	61	9	71.7	28	11.8		7.05	4	9	18	19	S. W.
Southern Pines.....	75.7	95	4	88.1	51	13	63.3	44	24.8		7.32	6	12	13	12	S.
Salisbury.....	77.3	90	2	83.7	63	10	70.9	27	12.8		5.52				13	
Weldon.....	76.0	90	7	85.4	56	12	66.6	34	18.8		5.74	2	16	13	7	
Washington.....	76.1	93	7	82.5	60	9	69.7	33	12.8	77.3	8.23	8	11	12	16	S. W.
Wilmington.....	77.0	92	3	83.1	61	9	70.1	31	13.0	81.0	6.21	2	11	13	23	S. W.

STATE METEOROLOGICAL SUMMARY FOR JULY, 1891.

Mean Barometer 30.06 inches; normal for July 30.02.

Highest Barometer 30.32 inches on the 22d at Lynchburg, Va.

Lowest Barometer 29.71 inches on the 8th at Kitty Hawk.

Mean temperature 74.5 degrees; normal for July 78.6 degrees.

Highest temperature 97 on the 7th at Chapel Hill.

Lowest temperature 42 on the 9th at Franklin.

Average rain-fall 6.74 inches; normal for July 5.24 inches.

Greatest monthly rain-fall 11.49 inches at Oak Ridge.

Least monthly rain-fall 3.79 inches at Charlotte.

Average number of cloudless days 11.

Average number of partly cloudy days 10.

Average number of cloudy days 10.

Average number of rainy days 14.

Prevailing wind direction, South-west; average hourly velocity 4.3 miles per hour.

Prevailing direction from many years' observations, South-west; average hourly velocity 6.9 miles per hour.

The month was very wet, and the coolest July of past twenty years.





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SEPTEMBER, 1891.

No. 6.

TYPHOID FEVER does not seem to be decreasing in the State yet, judging from the reports for August. For July there were fifty-one reports received, and thirty-four of them showed typhoid fever; while for August fifty-two counties reported, thirty-eight of them reporting typhoid. In some of the localities reporting it for July, the disease was on the wane in August.

In July, 1889, the disease was reported from thirty-eight counties, and in 1890 from forty-one counties.

In August, 1889, it was reported from forty-one, and in 1890 from thirty-seven.

It would appear from this that the disease is not any more prevalent this year than usual, but while the number of counties reporting is not more, the general tone of the reports shows the disease to be of greater virulence and frequency in the counties that do report it.

Ice-cream Poisoning.

Dr. George S. Hull, in writing on the above topic, in the *Medical News*, says that about four years ago he published a report of some experiments that he was making with a view to

ascertaining the toxic agent in cases of ice-cream poisoning: since that time he has been following up this line of investigation, and now feels that a fuller exposition of his views may prove of use to the profession.

If the old theory, that cases of poisoning, not due to the introduction of foreign substances, such as arsenic, were due to the milk having been taken from cows that were diseased, were true, why should not milk which is consumed so much more largely, cause a far greater amount of sickness? And the same question comes up when we consider Dr. Vaughn's claim, that the illness is due to a substance which he calls tyrotoxin, which is the product of a peculiar kind of fermentation, but the ferment which produces it is not precisely known, neither are the conditions which are most favorable to its development matters of exact knowledge. In trying to obtain this product, he speaks of the great difficulty in getting the milk into the exact condition necessary for its generation. The fermentation which elaborates the ptomaine would, therefore, seem to be but a fortuitous occurrence, in nowise comparable in constancy to lactic fermentation. One would infer that tyrotoxin would most likely be present in

milk which has been kept in a warm place, in unclean pans, and especially in a vitiated atmosphere; and as these conditions very frequently obtain, why do we not hear of numerous cases of milk-poisoning, and but few of poisoning by ice-cream, instead of the *reverse*? Further, a boiling temperature will not only destroy the ferment, but will break up its excretion, tyrotoxin; and a freezing temperature should certainly not be conducive to the growth and activity of cell life.

He believes that the tyrotoxin theory will explain only a portion of the cases of ice-cream poisoning, and that we must look further for the chief cause. He describes the modern ice-cream freezer as consisting of an iron paddle coated with zinc, resting upon an iron bottom coated with the same metal, and a surrounding tinned-copper or tinned-iron can. Now, should the zinc or copper, by any chance, be dissolved to any extent by the contents of the can, we must expect serious results.

He then likens the ice-cream freezer to a galvanic cell, which is composed of two metals, one being more soluble than the other, partly immersed in an acid liquid, and having their free extremities connected by a wire or other good conductor of electricity. The electricity is generated at the expense of the more soluble metal, which is dissolved to a greater or less extent; according to the amount of electricity obtained, the dissolved portion remaining in solution in the liquid. Now, if we can get any electricity from the ice-cream freezer while its contents are being frozen, or before, or after, then there must be some chemical action going on between the liquid and the zinc, this being the more soluble of the two metals used in the construction of the freezer, by which the metal is taken up and held in solution by the liquid (the ice-cream), rendering it dangerous to consumers in direct proportion to the amount of metallic poison held in solution. To determine whether there be any electricity generated in the freezer, we use an instrument called the galvanometer, as in determining heat we use the thermometer. By letting the wire that connects the two metals of a galvanic battery pass through the galvanometer, the current of

electricity causes the needle of the instrument to swing to the right or the left, according to the direction of the current, and the deflection will also be in proportion to the strength of the current. In testing for the electricity in the freezer, the machine is prepared as if for freezing, but instead of allowing the two metals to be in contact at the bottom, they are connected at the top by means of a copper wire, and this wire passes through the galvanometer. He found that, even with the simplest and purest ice-cream mixture (cream, sugar and flavor), there is a deviation of the needle, telling us that a current is passing, and that it comes from the chemical action between the ice-cream and the zinc; or, in other words, that, however slowly, the poisonous metal is dissolving. Briefly, then, this is what is occurring: the zinc or positive element is acted upon by the fluid and a current generated, which passes across the cream to the tin, which is the negative element, then up the wire through the galvanometer and back again to the zinc, completing the circuit. The longer the zinc is in the freezer the greater will be the amount dissolved, the rapidity of the solution being directly dependent upon the character of the mixture in the can.

Without introducing lengthy tables, he summarizes a large number of experiments by saying that, while pure, fresh cream deflected the needle of a moderately sensitive galvanometer but 7 degrees, the cream, when sour, swung the needle around violently to 90 degrees. Pure milk registered 40 degrees, and when sugar and corn-starch were added, 45 degrees. When eggs were incorporated, the needle moved to 80 degrees. None of the formulæ for ice-cream mixtures failed to show some deflection, proving that all of them were capable of acting, in some degree, upon the zinc. When any of these mixtures became sour, or acid fruits were added, the needle turned rapidly to 90 degrees. If, by any mischance, salt finds its way into the cream, the deflection is greatly increased on account of the zinc being more rapidly dissolved by the active sodium chloride. The resulting zinc chloride renders the ice-cream so much more poisonous.

He sums up his conclusions as follows:

1. If we desire the least quantity of metallic poison in our ice-cream, and still keep in use our modern freezer, we should see that the ingredients are pure, that the mixture is frozen quickly and the paddle at once removed.

2. The amount of poisonous salts is increased by acid mixtures, especially by the adding of eggs, corn-starch, etc. The addition of salt for flavoring purposes, as done by some manufacturers, becomes criminal, and it is grossly careless to allow any of the salt from the outside to get into the can. If, through fermentation, ice-cream should contain tyrotoxicon, then the mixture must be acid, and will, on this account, dissolve still more zinc or copper.

3. The amount of dissolved metal depends upon the length of time the paddle is left in the can, or, if the can have a zinc-coated bottom and tin sides, the length of time the cream remains in it; or the amount of electrical action will again vary if the can be copper coated with tin, and the tin be worn off so as to expose the copper, thus producing local currents and dissolving the copper.

But if the danger element is to be entirely removed from our "national luxury," it is more important that there be used in the construction of the freezer but *one kind of metal*, and one not easily oxidized. *No dissimilar metals should be in contact in any fluid* for human consumption, especially if the fluid be acid, or contain any saline matter.

"We estimate," says Dr. Storrs in his address as President of the Connecticut Medical Society, "That a school-room of fifty pupils would throw off in the form of cutaneous and pulmonary exhalation in one month of five hours each day, 750 pounds, which contains much putrescible matter, and in rooms deficient in ventilation, is precipitated, and gives, in its decay, the peculiar odor of the badly ventilated rooms. These respiratory impurities furnish the best possible conditions for the growth and dissemination of microbes,"

Summary of Mortuary Statistics for August, 1891.

(FOURTEEN TOWNS.)

	White.	Col'd.	Total.
Aggregate population	52,293	39,623	91,926
Aggregate deaths	58	84	142
Temporary annual death-rate per 1,000	13.3	25.4	18.5
Deaths under 5 years old,			63

Causes of death.

Typhoid fever	6	1	7
Malarial fever	1	7	8
Whooping-cough	1	2	3
Measles	0	1	1
Pneumonia	2	1	3
Consumption	3	13	16
Brain diseases	1	1	2
Heart diseases	5	5	10
Neurotic diseases	3	1	4
Diarrhœal diseases	10	17	27
All other diseases	22	29	51
Accident and violence	2	1	3
Suicide	0	1	1
Still-born	2	4	6
	58	84	142

Review of Diseases for August, 1891.

(52 COUNTIES REPORTING.)

Bronchitis—Reported from Stanly.

Catarrhal Fever—From New Hanover.

Chicken Cholera—From Pender and Pitt.

Diarrhœa—From Duplin, Martin, McDowell, Orange, Sampson and Stanly—6 counties.

Diphtheria—From Cabarrus, Macon, Martin, Richmond, Rowan and Watauga—6 counties.

Distemper—From Guilford and Martin.

Dysentery—From Duplin and Sampson.

Cholera (hogs)—From Bertie, Davidson, Duplin, Macon, Pender, Pitt, Robeson and Sampson—8 counties.

Jaundice—From Alamance.

Malarial Fever—From Alamance, Caswell, Columbus, Davidson, Duplin, Edgecombe, Gaston, Greene, Guilford, Halifax, Iredell, Martin, Moore, Nash, Northampton, Orange, Pitt,

Richmond, Rowan, Sampson, Stanly, Warren, Wayne and Wilson—24 counties.

Malarial Fever (Hæmorrhagic)—From Martin, Montgomery, New Hanover, Pender and Pitt—5 counties.

Malarial Fever (pernicious)—From Chatham, Montgomery, New Hanover, Pender and Pitt—5 counties.

Measles—From Carteret, Cumberland, New Hanover, Orange and Rutherford—5 counties.

Pink-Eye—From Pitt.

Pneumonia—From Pitt and Wayne.

Tonsilitis Follicular—From Greene.

Tonsilitis Membranous—From Randolph.

Typhoid Fever—From Alexander, Buncombe, Burke, Caldwell, Caswell, Chatham, Cherokee, Chowan, Columbus, Duplin, Forsyth, Franklin, Gaston, Greene, Guilford, Iredell, Martin, McDowell, Montgomery, Moore, Nash, New Hanover, Orange, Pender, Pitt, Randolph, Richmond, Rowan, Sampson, Stanly, Swain, Tyrrell, Wake, Warren, Watauga, Wayne, Wilson and Yancey—38 counties.

Scarlatina—From Montgomery.

Stagers (horses)—From Pitt.

Whooping-Cough—From Burke, Davidson, Forsyth, Iredell, Nash, New Hanover, Pitt, Rutherford, Warren, Watauga, Wilson and Yancey—12 counties.

Summary of Reports from County Superintendents for August, 1891.

Alamance—Dr. George W. Long, Graham. The sanitary condition of the public buildings is fair. No efforts at improvement recently. There are some ponds in the county which could be drained to advantage. Malarial fevers prevail to a limited extent. A number of cases of icterus have occurred, in fact it is almost epidemic in the interior of the county.

Alexander—Dr. J. B. Watts, Taylorsville. Typhoid fever has prevailed in all sections of the county. The sanitary condition of the county is not so good as at my last report, owing to the unusual amount of rain-fall during the past month. The sanitary condition of the public buildings is about as usual.

I take the time and pleasure in answering the questions as accurately as I can which you asked some time ago concerning the fever which has been and is now raging in this part of the country.

1. The average duration was about four weeks.

2. It does not follow the text-book descriptions of typhoid exactly, but enough that one can readily make a diagnosis.

3. The rose-colored eruption is found in about one-half the cases.

4. Diarrhœa occurs in nearly all.

5. In regard to the constancy of the enlargement of the spleen, I did not find an appreciable enlargement in the cases that came under my supervision, which amounted to about thirteen, although, as I am young in the business, I might have overlooked it.

6. Stupor and nervous symptoms were present in all the cases.

7. Number of deaths—four.

8. The disease occurred simultaneously in several places.

9. It seemed to be contagious in a slight degree, and in numerous instances was it transmitted from one to others of the same family.

10. I do not think the cause was local, although I find the sanitary surroundings of some of the homes of those who have had the fever very imperfect in relation to the water-supply and out-buildings. The most of them receive water from springs, and the drainage from the out-buildings in nearly every instance is toward the spring or well, as the case may be.

11. I do not suggest any climatic cause.

After a thorough examination of the subject, and consulting with some of the other physicians of this county, the above is about as correct a report as I can make.

Allegheny—No board of health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Ashe—No board of health.

Beaufort—Dr. W. A. Blount, Washington. No report.

Bertie—No board of health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No board of health.

Buncombe—Dr. H. B. Weaver, Asheville. There have been two cases of typhoid fever reported. The sanitary condition of the county is remarkably good in all portions. That of the public buildings is good.

Burke—Dr. J. L. Laxton, Morganton. There have been reported ten cases of whooping-cough and twenty of typhoid fever. The sanitary condition of the county is good, so far as I have had reports. There has been an epidemic of hog-cholera in the western part of the county. The jail is in a bad sanitary condition. It is an old building, and has been condemned and ordered repaired or a new one built, but it is quite uncertain as to when any change will be made. Poor-house is in good condition.

Cabarrus—Dr. R. S. Young, Concord. There have been reported seven cases of diphtheria and thirteen of typhoid fever. The sanitary condition of the county is good.

Caldwell—Dr. A. A. Kent, Lenoir. The general health of the county has been good. There have occurred a few mild cases of typhoid fever—no deaths.

Camden—No board of health.

Carteret—Dr. M. F. Arendell, Morehead City. The sanitary condition of the county is good—measles have prevailed. Public buildings are in good sanitary condition.

Caswell—Dr. R. H. Williamson, Yanceyville. Intermittent, remittent and a few cases of typhoid fevers have prevailed. The sanitary condition of the county is very good, considering the amount of rain-fall; also that of the public buildings.

Catawba—Dr. J. M. McCorkle, Newton. No report.

Chatham—Dr. H. T. Chapin, Pittsboro. There have occurred twelve cases of typhoid and one of pernicious malarial fever. The sanitary condition of the county is better than last month. Not much sickness now—some intermittent fever in certain sections. Our public buildings are in good condition; a well has recently been dug at the poor-house.

Cherokee—Dr. J. F. Abernathy, Murphy. The health of the county, with the exception of

one precinct, is good. Typhoid fever, or a fever closely allied to typhoid, is raging in this precinct. [We have received a later postal from the doctor, saying that "the fever that has been prevailing in this county is fast abating. I don't think there are more than half a dozen patients in the county." He reported twenty cases.] The sanitary condition of the public buildings is very much improved. The new court-house at this place is situated on an elevated and salubrious, spot easily drained and ventilated.

Chowan—There have been a few cases of typhoid fever reported. The sanitary condition of the county is good. Also, that of the public buildings.

Columbus—Dr. Isaac Jackson, Whiteville. The sanitary condition of the county is good. There has been more typhoid fever than usual, and less malarial. The sanitary condition of the public buildings is good.

Craven—Dr. Leinster Duffy, New Berne. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county is good; one case of measles reported. That of the public buildings is good.

Currituck—No board of Health.

Dare—No board of health.

Davidson—Dr. R. L. Payne, jr., Lexington. Whooping-cough has prevailed in scattered portions of the county. Hog cholera has been epidemic in the eastern part. The sanitary condition of the county is good, and there has been less malaria than usual at this season. The sanitary condition of the public buildings is good.

Davis—No board of health.

Duplin—Dr. J. W. Blount, Kenansville. Hog cholera has prevailed in some sections of the county, but it is not general. The sanitary condition of the county is good; there are a number of cases of typhoid fever reported in several portions of the county, but few cases of intermittent and some cases of diarrhoea and dysentery. The sanitary condition of the public buildings is good—but little sickness among the inmates.

Durham—Dr. N. M. Johnson, Durham.

The health of the county for the past month has been very good. The sanitary condition of the public buildings seems to be very good.

Edgecombe—Dr. Donald Williams, Tarboro. Malarial fever has prevailed in some portions. August has been a very hot month, with excess of rain, and malarial fevers have prevailed.

Forsyth—Dr. D. N. Dalton, Winston. There have occurred a few cases of whooping-cough with several of typhoid fever; the latter more in the country than in town. The sanitary condition of the county and the public buildings is good.

Franklin—Dr. E. S. Foster, Louisburg. There have been five cases of typhoid fever reported. The sanitary condition of the county, so far as I can learn, is very good. That of the public buildings is also good.

Gaston—Dr. E. B. Holland, Dallas. Typhoid and malarial fevers have prevailed in all portions of the county. The sanitary condition of the public buildings is good.

Gates—No board of health.

Graham—No board of Health.

Granville—Dr. Patrick Booth, Oxford. The sanitary condition of the county is fair, but might be improved in towns and villages. The sanitary condition of the public buildings is good and all well kept.

Greene—Dr. E. H. Sugg, Snow Hill. Malarial fever has prevailed in the county, and there have occurred four cases of typhoid, with a good many of follicular tonsilitis. The sanitary condition of the county is, as usual, good. That of the public buildings is also good.

Guilford—Dr. E. R. Michaux, Greensboro. There is an occasional case of distemper among horses. The health of the county is fair; that of the town is much better than of the county, however. Sickness in town and county has been principally malarial, with an occasional case of typhoid fever—very rare. The sanitary condition of the public buildings is very good indeed. Of course our jail is not what it should be in a sanitary way.

Halifax—Dr. A. B. Pierce, Weldon. Malarial fevers have prevailed in many portions of the county. The sanitary condition of the county is as good as usual at this season of the year.

Not much intermittent fever—mostly of the continued type. Improvements promised at the poor-house at an early day. Other improvements contemplated as to the diet of the inmates.

Harnett—No board of health.

Haywood—Dr. R. L. Allen, Waynesville. No report.

Henderson—Dr. W. B. Reese, Hendersonville. No report.

Hertford—No board of health.

Hyde—No board of health.

Iredell—Dr. M. W. Hill, Statesville. The sanitary condition of the county has been very good. There have been a few cases of fever—typhoid and malarial—in different parts of the county. There has been whooping-cough in or near to the city. The sanitary condition of the public buildings is right good; there are no efforts at improvement.

Jackson—Dr. J. M. Candler, Dillsboro. The sanitary condition of the county cannot be any better—entirely free from any kind of fever for the past month. That of the public buildings is good—washed inside with lime and well ventilated.

Johnson—Dr. L. L. Sasser, Smithfield. No report.

Jones—No board of health.

Lenoir—Dr. C. B. Woodley, Kinston. Through the efforts of Dr. Woodley this board has just been revived, and he will send in his first report next month.

Lincoln—Dr. W. L. Crouse, Lincolnnton. No report.

Macon—Dr. J. M. Lyle, Franklin. Diphtheria in a mild form has prevailed in many portions of the county, about twenty-five cases reported. Hog cholera, not very malignant, has prevailed in many portions of the county. The sanitary condition of the public buildings is very good.

Madison—No board of health.

Martin—Dr. W. H. Harrell, Williamston. Malarial and typhoid fevers have prevailed in all portions of the county. There have been an unusual number of cases of malarial fever and more typhoid than I have ever seen, but of a mild type. There have occurred five cases

of hæmorrhagic malarial fever, and there have been some diarrhœal troubles, due to excess of surface water in the wells, the result of rains. The sanitary condition of the public buildings is good.

McDowell—Dr. J. H. Gilkey, Marion. Typhoid fever and summer complaints have prevailed in some parts, and there has been reported one case of diphtheria. With these exceptions the health and sanitary condition of the county have been very good. There has been an epidemic of distemper among horses. Sanitary condition of the public buildings is as good as the circumstances will admit of.

Mecklenburg—No board of health.

Mitchell—Dr. C. E. Smith, Bakersville. No report.

Montgomery—Dr. F. E. Asbury, Asbury. There have been reported six cases of scarlatina, seven of typhoid fever, three of pernicious and seven of hæmorrhagic malarial fever. The sanitary condition of the county is good, as far as I can learn. That of the poor-house and the health of the poor is good; we need a new jail and are still trying to get them to build it.

Moore—Dr. Gilbert McLeod, Carthage. The sanitary condition of the county is good. There have been some simple continued and remittent fevers, with very few cases of typhoid. The sanitary condition of the public buildings is good.

Nash—Dr. G. W. Lewis, Spring Hope. Intermittent and remittent fevers have prevailed in various portions of the county. The sanitary condition of the county is fairly good. We have had only a few cases of typhoid fever reported; we have had also some cases of whooping-cough. Our jail and poor-house are in very good sanitary condition. We have no board of health organized yet.

New Hanover—Dr. F. W. Potter, Wilmington. There have been reported one case of measles, ten of whooping-cough, ten of typhoid fever, four of pernicious and one of hæmorrhagic malarial fever. Quite a number of cases of continued fever, especially on the sounds. A good number of cases of catarrhal fever exist, attended occasionally by pains similar to *la grippe*. The jail, with the excep-

tion of broken cement, is in good condition. Only one inmate in the house of correction, which is in good condition. Sanitary condition of the poor-house is good—bedding of inmates aired whenever the weather will permit.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—No board of health.

Orange—Dr. D. C. Parris, Hillsboro. We have had during August a prevalence of fevers both malarial and typhoid. Both kinds have been rather severe in type. Pulmonary troubles are frequent complications of both kinds. The superabundance of rainy weather and necessarily small amount of sunshine, together with the very hot weather, has had a telling effect on the health of our county. Chronic cases have suffered more than usual. Typhoid and malarial fevers, bowel and neurotic diseases have prevailed this month. We have had a few cases of measles. The sanitary condition of the public buildings is fairly good except the jail, which is not properly lighted or ventilated. No effort at immediate improvement.

Pamlico—No board of health.

Pasquotank—No board of health.

Pender—Dr. S. S. Satchwell, Burgaw. Ten cases of typhoid fever and two of hæmorrhagic malarial fever have been reported. Hog and chicken cholera have prevailed in many portions of the county. The sanitary condition of the county is improving; the people are putting much more value on good drinking-water. The sanitary condition of the public buildings is fair. Both malarial and typhoid fevers have extensively prevailed during August. Many cases of a severe type.

Perquimans—No board of health.

Person—No board of health.

Pitt—Dr. B. T. Cox, Redalia. Typhoid fever has prevailed in all portions of the county, several deaths being reported. I attended a family of four, everyone being stricken down within twenty-four hours. No cause for its sudden appearance among them could be found. Malarial fevers have been more abundant than in several seasons. Two cases of pernicious malarial heard from and one of hæmorrhagic.

Whooping-cough quite extensive; one case of catarrhal pneumonia has occurred. Hog and chicken cholera in some localities; pink-eye and staggers among horses have prevailed during the month. The aged and infirm are nicely taken care of.

Polk—Dr. Henry Shankle, Mill's Springs. No report.

Randolph—Dr. J. W. Long, Randleman. Typhoid fever is certainly abating, very few new cases being reported. A case of membranous tonsillitis has occurred in my own family, developing into membranous pharyngitis. Just across the street is a typical case of membranous rhinitis (bilateral). Both these cases *may* be diphtheritic. There has been no effort to improve the sanitary condition of the public buildings.

Richmond—Dr. J. M. Covington, Rockingham. The sanitary condition of the county and public buildings is only fair. There have been reported eight cases of typhoid fever, five of diphtheria, as well as a number of cases of malarial fever of mild type.

Robeson—Dr. R. F. Lewis, Lumberton. There has been but little sickness in any part of the county. There has been an epidemic of hog cholera. The sanitary condition of the county is fair; also that of the public buildings. Work has been begun on the court-house.

Rockingham—No board of health.

Rowan—Dr. J. J. Summerrell, Salisbury. So far as reported the county seems exempt from disease, except those of malarial origin, and not as much of that as usual in August. There have been a few cases of typhoid fever in Salisbury, and I hear of a few cases in the country. Diphtheria has been reported. The jail is in good condition. The commissioners have determined to make some very needed repairs to the court-house which I have been urging for several years. This has been the hottest summer for several years.

Rutherford—Dr. W. A. Thompson, Cliffdale. Our county is unusually healthy just now. There have occurred a few cases of measles and whooping-cough. The sanitary condition of the county is better than it has been in some time. Also that of the public buildings is better than for some time.

Sampson—Dr. J. A. Stevens, Clinton. There has been an epidemic of hog cholera. We have had very much sickness the past month. The prevailing diseases are diarrhoea, dysentery, cholera-infantum, malarial and typhoid fevers. I try hard to urge upon the people the importance of sanitation. The sanitary condition of the jail is as good as the old structure will admit. The poor-house is in excellent condition. It is with regret that I announce the death of Mr. James Shipp, the very worthy keeper of the poor-house. He died suddenly of heart disease at the post of duty. It will be hard to fill his place.

Stanly—Dr. D. P. Whitley, Plyler. Malarial fever has prevailed in some parts of the county. There have been reported two cases of typhoid fever and one of pernicious malarial. There has been an abundance of rain, with some very warm weather. Diarrhoea among children and bronchitis have prevailed. Our jail does not offer any inducement to health-seekers. The poor-house, by reason of age, has too much decayed matter about it, but otherwise is in good condition. There is some talk of building a new court-house.

Stokes—Dr. W. V. McCauless, Danbury. No report.

Swain—No board of health.

Swain—Dr. R. L. Davis, Bryson City. There have been eight cases of typhoid fever reported. The sanitary condition of the county is better than it has been for some time; no sickness of any kind at present. Public buildings are not in as good sanitary condition as they should be, and there are no efforts being made to improve them.

Transylvania—No board of health.

Tyrrell—Dr. Ab. Alexander, Columbia. There have been reported ten cases of typhoid fever and one of pernicious malarial. The sanitary condition of the county is good. That of the jail is bad.

Union—Dr. W. C. Ramsey, Monroe. No report.

Vance—Dr. A. Cheatham, Henderson. No report on diseases or the sanitary condition of the county. Sanitary condition of the public buildings is good.

Wake—Dr. James McKee, Raleigh. There have been reported three cases of typhoid fever. The sanitary condition of the county is as good as could be expected, considering the heavy rain-fall for the past two weeks, overflowing the low lands throughout the county. The sanitary condition of the public buildings is very good, and constantly improving.

Warren—Dr. P. J. Macon, Warrenton. There have been reported several cases of whooping-cough and a few of typhoid fever. Remittent and intermittent fevers have prevailed throughout the county. Whooping-cough of a very malignant type in the sections of Warrenton and Littleton; and Shocco and Littleton sections report malaria of a mild type, easily controlled by quinine, etc. The above fevers due to excessive rains and want of sunshine. The sanitary condition of the public buildings is good.

Washington—No board of health.

Watauga—Dr. W. B. Councill, Boone. There have been reported ten cases of diphtheria and eight of typhoid fever. The month has been remarkably healthy until the last days, when the above diseases have occurred, both of a mild form, with no deaths resulting. Whooping-cough has abated—no new cases. The new jail is all that could be desired. It has

bath-rooms and a constant flow of good spring water from a fine mountain spring; it is well ventilated and well kept in every way, and is perfectly healthy. The poor-house is first-class in all of its arrangements—inmates comfortable and well cared for.

Wayne—Dr. John Spicer, Goldsboro. There have been reported of (so-called by some) typhoid fever, two cases. The sanitary condition of the county is good. There are now some cases of pneumonia, malarial and continued fevers. Sanitary condition of the public buildings is good.

Wilkes—No board of health.

Wilson—Dr. Albert Anderson, Wilson. There have occurred one case of whooping-cough and two of typhoid fever. Intermittent and remittent fevers have occurred in nearly all portions of the county. The sanitary condition of the county is reported good, as also that of the public buildings.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. S. Ray, Burnsville. There have occurred two cases of whooping-cough and five of typhoid fever. The sanitary condition of the county is moderately good at present. The jail is now kept as clean as it should be.

Condition of Jails and Poor-houses by Counties for August, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	12 ^a	600	.....	.....	35 ^a	500	.....	.....
Alexander.....	4	350	0	4	11	500	0	2
Alleghany.....	.....	.....	.....	.....	.....	.....	.....	.....
Anson.....	.....	.....	.....	.....	.....	.....	.....	.....
Ashe.....	.....	.....	.....	.....	.....	.....	.....	.....
Beaufort.....	.....	.....	.....	.....	.....	.....	.....	.....
Bertie.....	.....	.....	.....	.....	.....	.....	.....	.....
Bladen.....	.....	.....	.....	.....	.....	.....	.....	.....
Brunswick.....	.....	.....	.....	.....	.....	.....	.....	.....
Buncombe.....	8	*	.....	.....	21	800	.....	.....
Burke.....	6	.....	6	6	8	.....	4	5
Cabarrus.....	13	906	3	3	20	*	6	9
Caldwell.....	4	715	2	4	6	.....	.....	2
Camden.....	.....	.....	.....	.....	.....	.....	.....	.....
Carteret.....	1	*	0	0	0	.....	.....	.....
Caswell.....	8	450	.....	3	23	1,000	9	3
Catawba.....	.....	.....	.....	.....	.....	.....	.....	.....
Chatham.....	6	.....	.....	2	28	.....	.....	10
Cherokee.....	5	*	4	5	3	560	.....	.....
Chowan.....	.....	.....	.....	.....	.....	.....	.....	.....
Clay.....	.....	.....	.....	.....	.....	.....	.....	.....
Cleveland.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbus.....	3	*	.....	0	8	*	.....	1
Craven.....	.....	.....	.....	.....	.....	.....	.....	.....
Cumberland.....	7	.....	.....	.....	13	.....	.....	.....
Currituck.....	.....	.....	.....	.....	.....	.....	.....	.....
Dare.....	.....	.....	.....	.....	.....	.....	.....	.....
Davidson.....	4	*	0	1	23	720	0	1
Davie.....	.....	.....	.....	.....	.....	.....	.....	.....
Duplin.....	0	.....	.....	.....	16	*	.....	.....
Durham.....	25 ^b	1,000	.....	6	16	1,000	.....	2
Edgecombe.....	7	*	2	3	23	*	4	6
Forsyth.....	19	900	9	8	21	.....	4	3

*Space exceeds one thousand cubic feet. (a) Includes 7 in house of correction. (b) Includes 17 in house of correction.

Condition of Jails and Poor-houses by Counties for August, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	4			1	20			2
Gaston.....	14				10			
Gates.....								
Graham.....								
Granville.....	4	*			21	855		
Greene.....	3	500		2	10	1,000		1
Guilford.....	18	693			28	*		
Halifax.....	11			2	46			7
Harnett.....								
Haywood.....								
Henderson.....								
Hertford.....								
Hyde.....								
Iredell.....	6				24			
Jackson.....	4	200	1	2	4	300	2	2
Johnston.....								
Jones.....								
Lenoir.....								
Lincoln.....								
McDowell.....	4	550	1	1	6	600	1	1
Macon.....	4	900	1	0	0			
Madison.....								
Martin.....	5	1,000	0	2	13	700	2	3
Mecklenburg.....								
Mitchell.....								
Montgomery.....	4				13			
Moore.....	4	*	0	0	7	*	0	3
Nash.....	3	*	1	2	36	800	10	8
New Hanover.....	22 ^a	600	19	7	17	1,000	14	6
Northampton.....								
Onslow.....								
Orange.....	3	512	0	2	26	*	8	10
Pamlico.....								

* Space exceeds one thousand cubic feet. a. Includes 1 in house of correction.

Condition of Jails and Poor-houses by Counties for August, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	6							
Perquimans								
Person.....								
Pitt								
Polk								
Randolph.....	7	960	0	0	31	491	9	10
Richmond.....	12				7			
Robeson.....	17	400			11	655		
Rockingham.....								
Rowan.....	4	*	0	1	15	*	2	0
Rutherford.....	4	*		2	28	800		6
Sampson.....	1				21			
Stanly.....	2	*	0	1	14	*	0	1
Stokes.....								
Surry								
Swain.....								
Transylvania								
Tyrrell.....	1	*	0	0				
Union.....								
Vance.....	7	*	1	1	15	*	0	3
Wake.....	15	*			105a			
Warren.....	4	*		2	15	*		2
Washington.....								
Watauga.....	2	600a		1	7			0
Wayne.....	4	952	0	1	5	*	0	0
Wilkes.....								
Wilson	8	*	0	1	18	*	7	7
Yadkin.....								
Yancey.....	1	*	0	1	0			

* Space exceeds one thousand cubic feet.

a. Includes 45 in house of correction.

Mortuary Report for August, 1891.

TOWNS AND REPORTERS.	Races.	Population.		Temporary Annual death Rate per 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neuritic Diseases.	Diarrhoeal Diseases.	All other Diseases.	Accid't & Violence.	Suicide.	Still-Born.	Total		
		By Races	Total.	By Races	Tot.																	By Races.	By Towns	Deaths under 5 yrs
Asheville.....	White	9,000	12,000	8.0	13.0	2						1	1	1					1			6	13	6
Dr. H. B. Weaver.....	Color'd	3,000		28.0										2						3					7
Charlotte.....	White																						4	8
Dr. J. Scarr.....	Color'd																							
Durham.....	White	4,000	7,000	12.0	13.7							1			2			1				4	8	4
Dr. N. M. Johnson.....	Color'd	3,000		16.0															1			2		
Fayetteville.....	White	2,800	5,000	25.0	31.2							1					3	2				6	13	3
Dr. J. H. Marsh.....	Color'd	2,200		38.2				3			1						1	1						
Goldsboro.....	White	2,800	5,000	34.3	19.2										1			6	1			8	8	4
Dr. John Spicer.....	Color'd	2,200		0.0																				
Henderson.....	White	2,256	4,256	0.0	16.9																	0	6	3
Dr. A. Cheatham.....	Color'd	2,000		36.0						1			1					3						
Newbern.....	White																							
S. Fulcher, City Clk.....	Color'd																							
Oxford.....	White																							
Dr. J. M. Hays.....	Color'd																							
Raleigh.....	White	8,000	15,000	13.5	19.2							1	1				2	5				9	15	24
Dr. Jas. McKee.....	Color'd	7,000		25.7										2	1				7	5				
Salisbury.....	White	3,534	5,300	10.2	13.6														2	1		3	3	6
Dr. J. J. Summerell.....	Color'd	1,766		20.9		1															2					3
Tarboro.....	White	1,258	2,370	28.6	20.2	2												1				3	1	4
Dr. D. Williams.....	Color'd	1,112		10.8															1					
Warrenton.....	White	1,050	2,000	11.4	12.0	1																1	1	2
Dr. P. J. Macon.....	Color'd	950		12.6						1														
Wilmington.....	White	9,000	21,000	14.7	23.4	1	1									2	2	4				11	41	19
Dr. F. W. Potter.....	Color'd	12,000		30.0			4							5	5		5	3	9	1	1	2			30
Greensboro.....	White	4,000	6,000	3.0	6.0										1							1	2	3
Dr. E. R. Michaux.....	Color'd	2,000		12.0										1						1				
Statesville.....	White	2,000	2,500	6.0	4.8					1												1	0	1
Dr. M. W. Hill.....	Color'd	500		0.0																				
Wilson.....	White	2,000	3,500	24.0	30.8											1	2					1	4	9
Dr. A. Anderson.....	Color'd	1,500		40.0										1				3	1					
Hillsboro.....	White	600	1,000	20.0	48.0														1			1	3	4
Dr. D. C. Parris.....	Color'd	400		90.0																3				
Monroe.....	White																							
Dr. W. C. Ramsay.....	Color'd																							
Salem—S. W. Cl-	White																							
nard, City Clerk.....	Color'd																							

Meteorological Summary for North Carolina, August, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).								Mean Humidity.	Total Precipitation.	NO. OF DAYS				Prevalling Wind.	
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.			Mean Daily Range	Cloudless.	Partly Cloudy.	Cloudy.		Rainy.
Asheville.....	70.0	89	9	81.4	52	24	60.4	37	21.0	70.9	7.86	16	9	6	11	N.
Bakersville.....	69.8	88	9	78.8	52	24	60.8	36	18.0	88.8	4.23	.....	.....	.....	9	S. W.
Charlotte.....	76.4	95	15	85.3	55	30	67.6	40	17.7	84.0	6.82	9	11	11	18	S. W.
Chapel Hill.....	77.8	97	9	87.9	55	30	67.7	42	20.2	.....	11.71	.....	.....	.....	13	.....
Douglas.....	76.0	97	10	88.3	54	29	63.8	43	24.5	.....	8.20	11	13	7	13	N. E.
Franklin.....	69.4	92	4	83.7	45	24	55.1	47	28.6	.....	2.80	7	5	19	5	S.
Hendersonville.....	73.0	84	8	78.2	62	25	67.9	22	11.3	85.1	3.55	1	9	10	4	W.
Kitty Hawk.....	78.6	91	10	84.3	73	30	73.0	18	11.3	.....	7.63	9	11	11	18	S. W.
Littleton.....	74.9	95	10	84.9	52	29	64.9	43	20.0	.....	10.29	6	5	20	20	S. W.
Lexington.....	73.3	96	20	85.6	55	30	66.4	41	19.2	85.3	8.09	9	9	13	16	S.
Lenoir.....	72.6	88	10	79.2	58	30	68.0	30	11.2	.....	5.90	.....	.....	.....	12	.....
Morganton.....	73.9	97	11	83.2	57	30	68.5	40	14.7	80.5	6.04	.....	.....	.....	11	.....
Mount Airy.....	72.6	91	10	82.2	56	30	63.1	35	19.1	.....	7.23	3	10	18	15	S. W.
Oak Ridge.....	74.8	94	10	84.1	53	30	65.4	41	18.7	88.8	7.26	7	9	15	18	S. W.
Pittsboro.....	75.2	91	21	82.9	56	30	67.6	35	15.3	.....	8.80	4	10	17	12	S.
Raleigh.....	76.0	93	9	83.8	56	29	68.1	37	15.7	87.2	10.42	6	11	14	15	S. W.
Southport.....	79.4	88	23	84.8	62	30	74.1	26	10.7	.....	7.46	7	14	10	18	S. W.
Southern Pines.....	77.8	97	10	90.0	52	31	65.6	45	24.4	.....	10.58	9	7	15	12	S.
Salisbury.....	78.5	92	10	84.6	60	30	73.2	32	11.4	.....	7.19	.....	.....	.....	17	.....
Weldon.....	76.5	94	10	84.3	56	30	68.7	38	15.6	.....	8.93	12	1	18	14	S.
Washington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington..	79.0	93	16	86.1	60	30	71.8	33	14.3	85.1	11.96	8	14	9	20	S.

STATE METEOROLOGICAL SUMMARY FOR AUGUST, 1891.

Mean Barometer 30.04 inches; normal for August, 30.03.

Highest Barometer 30.25 inches on the 26th at Hatteras.

Lowest Barometer 29.69 inches on the 1st at Kitty Hawk.

Mean temperature 75.7 degrees; normal for August 76.4 degrees.

Highest temperature 97 on the 10th at Douglas.

Lowest temperature 45 on the 24th at Franklin.

Average rain-fall 8.00 inches; normal for August 6.09 inches.

Greatest monthly rain-fall 16.30 inches at Smithfield.

Least monthly rain-fall 2.80 inches at Franklin.

Average number of cloudless days 8. Normal number 9.

Average number of partly cloudy days 10. Normal number 14.

Average number of cloudy days 13. Normal number 8.

Average number of rainy days 15. Normal number 12.

Prevailing wind direction, South and South-west; average hourly velocity 5.7 miles.

Prevailing direction from many years' observations, South-west; average hourly velocity 6.8 miles.

The month was very wet, especially the latter part.

BULLETIN

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OCTOBER, 1891.

No. 7.

DISINFECTION AND THE USE OF DISINFECTANTS.

BY F. P. VENABLE, PH. D., F. C. S.

It is well first to understand the objects of disinfection. Though not absolutely proved in all cases, it is generally believed that infectious diseases are communicated by certain small organisms having definite life processes and conditions of growth. If we destroy the lives of these organisms the specific diseases cannot be communicated. Some of them contain germs or spores through which they can be reproduced, and it must be borne in mind that it is much more difficult to destroy these spores than the original organisms.

Merely antagonizing the conditions of growth, as by cold, or by the use of certain antiseptics, is by no means disinfection, and does not insure safety from the disease. The cold of winter may put a temporary stop to certain diseases, but unless thorough disinfection is practiced, they will reappear with the following summer. Deodorizing or rendering a mass of filth non-offensive is also not true disinfection.

Filth, excreta, decaying vegetable matter,

are not in themselves necessarily productive of disease. The disease must come, if the theory be true, from distinctive germs which may not be present in that particular filth. But all filth is dangerous as affording excellent media for the propagation of the disease—causing microbes—and should be removed or plentifully treated with lime. Care must be observed in stirring it up and handling it during the warm months.

We have to contend, then, with minute, invisible enemies, capable of rapid and enormous multiplication, and which may lie hidden in the clothing or *dejecta* of the patient, in the bedding and furniture of the sick-room, on its floor and walls, or, lastly, in the air.

NOTE.—Let the reader try this object lesson, in order to learn the minuteness of the spore dust we are speaking of. Take any umbrella-shaped mushroom, separate the stalk from it, and turn its gills down on a piece of white paper. If not too old, and in condition to drop its spore dust, after the lapse of a few hours there will be deposited a fine powder, taking somewhat the delicate tracing of the gills of the under side of the mushroom cap, the color being a dirty white, or brown, or red, varying as to the species. Examination with a pocket-glass will show that this fine dust is

an aggregation of minute grains or spores so small that some of them measure, as in the "horse mushroom," .0004 X .00025 inch. A little calculation would give an idea of the immense possibilities for reproduction from such a mass of "seed," which the spore dust really is. Having grasped this idea of minuteness, let us go a little further, and think, if you can, of a *bacillus*, call it a fungus—so minute that they are not visible to the naked eye—being like the *bacillus subtilis* which plays a part in the ferment in milk. These minute objects themselves bear spores—seeds—the minuteness of which carries us into the realms of imagination. It is such invisible, but active, objects we have to contend with, when their properties are harmful. Fortunately, a very large number we know to be helpful or conservative.

Where the air is infected, it is well to recognize the fact that we are powerless to remedy the evil. A sick-room, too, cannot be thoroughly disinfected during occupancy, nor is it practicable to disinfect the body of the patient during life.

It would save trouble, and perhaps loss, if, as soon as the infectious nature of the disease is known, the room should be stripped of all unnecessary articles of furniture, the walls made bare of pictures, the windows of all extra hangings, and only a few needed strips of carpeting be left on the floor. Such strips can afterwards be burned, and so disinfected beyond all peradventure.

In disinfecting, four rules are to be observed:

1st. That the proper disinfectant for that particular purpose be used. There is no general disinfectant good for all cases.

2d. That abundance of time be allowed for its action. Fire is the only instantaneous disinfectant.

3d. That the disinfection be thorough. Imperfect disinfection is worse than none at all, because of the false confidence it inspires.

4th. That such a disinfectant be chosen, if possible, as will not injure valuable property.

A great many patented articles are offered on the market as disinfectants. Some of these are good—some are worthless; but it is unnecessary to purchase any of these, as cheap and

effective agents can readily be procured whose nature and action we know. The following are the principal disinfectants:

1st. Sunlight and Fresh Air.

The use of these, whenever admissible, in addition to those more strictly called disinfectants, cannot be too much insisted upon.

2d. Dry Heat.

Where the object is of little value, destruction by fire is the surest and quickest mode of disinfection.

A temperature sufficiently high for perfect disinfection, and yet below the point that would injure organic materials, is not often easy of application.

3d. Moist Heat; Boiling Water or Steam.

Whenever applicable, this is the most certain and simplest of disinfectants. Boiling clothing, etc., to be effective should be continued from half an hour to one hour. The germs of some diseases can be destroyed in fifteen minutes, or perhaps even a shorter time, but the prolonged boiling is in most instances safer.

Special apparatus is needed for the use of steam, which is most rapid and active under a pressure of ten pounds or more. Leather, furs, and rubber goods are injured by moist heat.

4th. Mercuric Chloride, or Corrosive Sublimate.

This is a very poisonous body and must be handled carefully. It is used in the form of a solution [two drachms to the gallon (1:500), or one drachm to the gallon (1:1000), or one-half drachm to the gallon (1:2000)]. These solutions must not be placed in metal receptacles; nor is it adapted for disinfecting steel, brass, tin, silver, etc. It acts injuriously upon lead, and will soon destroy a drain-pipe of that material. It is washed with great difficulty from some kinds of clothing, particularly silks and woollens.

5th. Chloride of Lime.

This body loses strength on keeping. It should contain at least twenty-five per cent. of available chlorine. Chlorinated soda changes more rapidly and is apt to be deficient in

strength, unless fresh. It is best not to use it unless satisfactory evidence of its freshness can be obtained.

When used as a powder, it is best to mix with plaster or with dry earth, so that it can be more easily sprinkled. It is commonly used in the form of solution, dissolving six ounces to the gallon. The muddy nature of the solution and the insoluble sediment do no harm. Filtering is unnecessary.

This body has a strong bleaching action, and so may act injuriously upon colored objects.

6th. Sulphur; Sulphurous Acid.

The sulphur should be in powder or small fragments. In burning, it is best to put it in a shallow iron pan and place this in a heap of wet sand or support it upon bricks above the surface of water in a large tub. At least three pounds must be burned to every thousand cubic feet of space. The most generally accepted view is, that sulphur thus burned is effective only in the presence of water. All objects in the room should be sprinkled with water, and a large pan-full should be evaporated during the burning of the sulphur. During the fumigation every crack and opening by which the gas might escape, must be closed. This body is also a bleaching agent and apt to injure colored objects.

7th. Carbolic Acid.

This is now believed to be effective in strong solutions only. The weaker solutions, carbolated soaps, etc., are antiseptic rather than disinfectant in their action.

GENERAL DIRECTIONS.

Disinfection of Excreta, etc.

To be carried out in all cases of cholera and typhoid fever. It would probably be wise, also, in epidemic dysentery, tuberculosis, and perhaps diphtheria, yellow fever, scarlet fever, and typhus fever. In cholera, diphtheria, yellow fever, and scarlet fever, vomited matter should be disinfected. The sputa of those sick with tuberculosis, diphtheria, scarlet fever and infectious pneumonia, and the urine of patients with infectious diseases should be treated in a similar manner.

The best disinfectant for disinfecting the materials mentioned above is chloride of lime. It is quickest and surest in action. Use one quart of the solution prepared as directed—which need not cost more than one or two cents a gallon—for each discharge in typhoid fever, cholera, etc. Mix well and leave in the vessel for at least one hour before throwing out. Chloride of lime can be bought in small air-tight packages for the purposes recommended.

Mercuric chloride cannot be relied upon as an efficient agent for the disinfection of such matter. When used a solution of 1:500 should be taken, in amount equal to the discharge, and allowed to stay in contact with it for two hours.

Disinfection of Clothing.

Boil all clothing and bedding, which can be so treated, for half an hour. If it cannot be immediately treated in this way, let it stand in a solution of mercuric chloride (1:1000) until it can be boiled. All that cannot be washed should be disinfected by steam in a suitable apparatus. Where neither of these is possible, destruction by burning seems the only sure method.

Disinfection of the Sick-room.

Sunlight, fresh air and cleanliness are here to be ranked first among the disinfectants. Apart from these means, no other disinfection is practicable while the room is occupied by the patient. When no longer occupied, the walls and floor should be washed with the solution of chloride of lime, diluted with three times its volume of water, and the room thoroughly aired for twelve to twenty-four hours. Then white-wash all plaster surfaces and scour all wood-work with soap and hot water, taking care that all corners and crevices are reached. Then air thoroughly once more.

In cases of small-pox, scarlet fever, diphtheria, typhus fever and yellow fever, fumigation with sulphur may be practiced after the washing described above,

Articles of furniture should be twice washed over with a two per cent. solution of carbolic acid.

Disinfection of the Person.

It is impracticable to disinfect the person of the patient. All possible means should be taken to insure cleanliness, however. For the attendant, the solution of chloride of lime, diluted with three parts of water, a two per cent. solution of carbolic acid, or, under proper medical supervision, a solution of corrosive sublimate (1:1000) may be used in washing the hands, etc.

In all bodily infectious diseases, the body of the dead should be enveloped in a sheet saturated with the standard solution of chloride of lime, or with a solution of corrosive sublimate (1:500). The latter is best.

Disinfection of Privy-vaults, Cess-pools, etc.

These may become infected by throwing in excreta, etc., which have not been previously disinfected. Where the amount of material is large, it will scarcely be practicable to use the solution of chloride of lime, though the surface can be disinfected by repeated and liberal use of it. Chloride of lime in powder may be sprinkled over the surface, and the wood-work should be washed down with the solution.

Disinfection of Ingesta.

During the prevalence of an epidemic of cholera, all drinking-water should be boiled, and this ought to be done whenever there is a suspicion that the water may be impure. It is thought that both typhoid fever and tuberculosis, and perhaps other diseases, can be conveyed through milk. A thorough boiling easily disinfects all such liquid foods.

Review of Diseases Reported for September, 1891.

Bronchitis—From Pitt and Stanly.

Chicken Cholera—From Onslow.

Cholera-morbus—From Iredell.

Diarrhœa—From Sampson and Stanly.

Diphtheria—From Alamance, Buncombe, Caldwell, Chowan, Jackson, Lincoln, Macon, Montgomery, New Hanover, Richmond, Union, Wayne and Yadkin—13 counties.

Distemper—From McDowell and Pitt.

Dysentery—From Sampson.

Hog-cholera—From Burke, Cherokee, Columbus, Montgomery, Pender, Randolph, Sampson and Wayne—8 counties.

Influenza—From Mitchell and Orange.

Jaundice—From Alamance.

Malarial Fever—From Alamance, Caswell, Chatham, Columbus, Cumberland, Duplin, Edgecombe, Granville, Greene, Halifax, Iredell, Johnston, Lenoir, Nash, New Hanover, Onslow, Orange, Pitt, Richmond, Rowan, Sampson, Wayne and Wilson—23 counties.

Malarial Fever (hemorrhagic)—From Jackson, Montgomery, Onslow and Wilson—4 counties.

Malarial Fever (pernicious)—From Johnston, Montgomery, Onslow, Stanly and Wilson—5 counties.

Measles—Carteret, Chowan, Granville, Moore, Onslow, Rutherford and Wayne—7 counties.

Pemphigus—From Onslow.

Pink-Eye—From Pitt.

Pneumonia—From Pitt.

Scarlatina—From Jackson and Richmond.

Staggers—From Cumberland, Greene, Onslow and Pitt—4 counties.

Tonsillitis—From Greene, Sampson and Union.

Typhoid Fever—From Alamance, Alexander, Buncombe, Burke, Caldwell, Catawba, Chowan, Columbus, Cumberland, Duplin, Gaston, Granville, Greene, Iredell, Jackson, Johnston, Lenoir, Lincoln, Macon, McDowell, Mitchell, Montgomery, Moore, Nash, New Hanover, Orange, Pender, Pitt, Randolph, Richmond, Rowan, Rutherford, Sampson, Stanly, Swain, Union, Yadkin and Yancey—38 counties.

Typho-malaria—From Anson, Caswell and Halifax.

Whooping-cough—From Alexander, Burke, Catawba, Cumberland, Granville, Iredell, Mitchell, Nash, New Hanover, Pitt, Richmond and Rutherford—12 counties.

Summary of Mortuary Reports for September, 1891.

(TWELVE TOWNS.)

	<i>White.</i>	<i>Col'd.</i>	<i>Total.</i>
Aggregate population.	46,214	38,512	84,726
Aggregate deaths.....	37	53	90
Temporary annual death- rate per 1,000.....	9.6	16.5	11.6
Deaths under 5 years old,			49
<i>Causes of death.</i>			
Typhoid fever.....	1	7	8
Malarial fever.....	1	5	6
Whooping-cough....	0	2	2
Measles.....	0	0	0
Pneumonia.....	0	0	0
Consumption.....	4	7	11
Brain diseases.....	0	1	1
Heart diseases.....	2	3	5
Neurotic diseases....	6	4	10
Diarrhoeal diseases...	7	4	11
All other diseases....	11	16	27
Accident and violence	1	0	1
Suicide.....	1	0	1
Still-born.....	3	4	7
	<hr/> 37	<hr/> 53	<hr/> 90

Summary of Reports from County Superintendents for September, 1891.

Alamance—Dr. George W. Long, Graham. Diphtheria in the northern part of the county; malarial fever and an occasional case of typhoid. Epidemic jaundice has prevailed, but has about disappeared. The sanitary condition of the county is good, except drainage. This would conduce, in my opinion, to better health, and especially in our towns. The back lots and privies and pig-styes are nuisances, which no one man can abate without the hearty co-operation of all the good citizens. The doctors themselves do not seem to give this subject as much attention as the Superintendent would have them do. The sanitary condition of the public buildings is good, except the jail and work-

house. The former is as good as the building will permit; the latter is not well ventilated. Since the jailer resides in the building, matters are more improved than before.

Alexander—Dr. J. B. Watts, Taylorsville. Typhoid fever has prevailed in all parts of the county, but is on the decline now. There are several cases of whooping-cough in and near the town. The sanitary condition of the county is good, and there has been no change in the condition of the public buildings.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. Typho-malarial fever has prevailed in Wadesboro to a limited extent. There has been in the town but one white death during the year—a case of membranous croup. The month of July was the healthiest month ever known—not one case of sickness. In August some mild cases of typho-malarial fever, lasting four and five weeks, with distinct intermissions, on which quinine has no effect towards arresting its course. The buildings at the poor-house are large, but neither ceiled nor plastered. There are six rooms. The court-house has not been rebuilt, but an appropriation for that purpose has been ordered by the County Commissioners. For jail, new steel cells, with good cots and all necessary sanitary appurtenances.

Ashe—No Board of Health.

Beaufort—Dr. S. T. Nicholson, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No Board of Health.

Bancombe—Dr. H. B. Weaver, Asheville. There has been one case of diphtheria, and eight of typhoid fever. The sanitary condition of the county is excellent; that of the public buildings is good, in every respect.

Burke—Dr. J. L. Laxton, Morganton. There have been reported six cases of whooping-cough and fourteen of typhoid fever. Hog-cholera has been epidemic in some parts of the county. The sanitary condition of the county is not as good as it should be, but we will use every available means to improve it. The

poor-house is in good sanitary condition, and little or no sickness in it for the past year. The jail is as cleanly and well kept as such a building and conveniences will admit, but it is not constructed with a view to good sanitation.

Cabarrus—No Board of Health.

Caldwell—Dr. R. L. Beall, Lenoir. There has been very little sickness of any kind throughout the county. No epidemic among the people or animals has been reported. Only four cases of typhoid fever and two of diphtheria reported—all of mild type. Poor-house is in good sanitary condition; but that of the jail is not good.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. Measles has prevailed. The sanitary condition of the county is good. The public buildings are in a healthy condition.

Caswell—Dr. R. H. Williamson, Yanceyville. Remittent, typhoid and typho-malarial fevers have prevailed. The sanitary condition of the county and public buildings is good.

Catawba—Dr. G. H. West, Newton. There have been reported nine cases of whooping-cough and seven of typhoid fever. There is very little sickness in the county, as far as I can learn. There has been an addition built to the jail during the month of September.

Chatham—Dr. H. T. Chapin, Pittsboro. The sanitary condition of the county is very good. Very little sickness, except a few cases of intermittent fever. Public buildings are in good condition.

Cherokee—Dr. J. F. Abernathy, Murphy. The condition of the poor-house is good, and that of the jail is fair. The health of the people, since the fever subsided, is very good; have had no new cases since the first of this month (September). No other contagious diseases prevailing, to my knowledge. The death-rate from this fever has usually been greater than for some seasons past—about one in twelve die. Hog-cholera is prevailing with great severity in portions of the county. The physicians of the county have succeeded in infusing into the minds of this people the importance of disinfection and cleanliness; and to this pre-

caution we attribute the premature cessation of the fever in our county. Heretofore when we have fever in the early summer, we have it in a more aggravated form in the autumn.

Chowan—No report.

Cleveland—Dr. O. P. Gardner, Shelby. There have been several cases of measles and diphtheria and some of typhoid fever reported. The sanitary condition of the county and public buildings is good.

Columbus—Dr. Isaac Jackson, Whiteville. There have been reported three cases of typhoid fever. There has been an epidemic of hog-cholera in some portions of the county. The sanitary condition of the county is very good. Malarial fevers have prevailed in some parts, but not to compare with former years. The sanitary condition of public buildings is very good.

Craven—Dr. Leinster Duffy, New Bern. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. Several cases of whooping-cough and ten or twelve of typhoid fever reported. Malarial fever has prevailed in many portions. A few cases of blind-staggers among horses reported. The sanitary condition of the county and public buildings is good.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Lexington. No report.

Duplin—Dr. J. W. Blount, Kenansville. There has been but little sickness—a few cases of typhoid and malarial fevers, generally of mild type, reported. The sanitary condition of the public buildings is good. Inmates are healthy, and no visible local cause for sickness.

Durham—Dr. N. M. Johnson, Durham. There has been very little sickness in the county for the month past. The sanitary condition of the public buildings is good.

Edgecombe—Dr. Donald Williams, Tarboro. Malarial fever has prevailed in some portions of the county. The sanitary condition of the county has been very good. The jail and poor-house are very well kept.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. No report.

Gaston—Dr. J. H. Jenkins, Dallas. The Superintendent being himself sick with typhoid fever, Dr. C. A. Carpenter reports that the health of the county is very good—only a few cases of fever. Jail and poor-house have no sickness.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. Patrick Booth, Oxford. There have been reported six cases of measles, three of whooping-cough, and ten of typhoid fever. Intermittent and remittent fevers are the prevailing diseases. The sanitary condition of the county is good. The people are using the Superintendent of Health gradually more, as needed. The sanitary condition of the public buildings is good.

Greene—Dr. E. H. Sugg, Snow Hill. Malarial and typhoid fevers have prevailed, and there has been almost an epidemic of follicular tonsillitis. Blind-staggers has been epidemic among horses. The sanitary condition of the county has been tolerably good; that of the public buildings good.

Guilford—Dr. E. R. Michaux, Greensboro. No report.

Halifax—Dr. A. B. Pierce, Weldon. Malarial and typho-malarial fevers have prevailed in some portions. The sanitary condition of the county is good. Very little intermittent fever. There is some improvement in the condition of the public buildings. There is more attention paid to the inmates in providing diet for the sick, such as a supply of milk.

Harnett—No Board of Health.

Haywood—Dr. J. H. Way, Waynesville. No report.

Henderson—Dr. W. B. Reese, Hendersonville. No report.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. The sanitary condition of the county has been ex-

ceptionally good. There have been a few cases of typhoid and malarial fevers, cholera-morbus, whooping-cough, follicular sore throat, etc. It is thought doubtful about the above being a case of genuine diphtheria. The sanitary condition of the public buildings is very good. There is some probability of some improvement in the jail in the near future.

The saloons of the town are closed, and the indications are that there will be fewer inmates of the jail in time to come, now that there are fewer temptations to indulge in the maddening potations that are sold over the average bar. I am told that there is a very potent chemical fluid of some character used by the whiskey trade, a few drops of which is sufficient to make three gallons of wine, and that this chemical sells for four dollars per ounce. I also know the man who is said to be the agent for it in Iredell county. If men will drink, the trade ought to be compelled, as far as possible, to furnish pure, unadulterated liquor; and the use of chemicals and other poisons ought to be made punishable by law; and also, that there ought to be a chemist whose business it would be to test by analysis all liquors put on the market. Certainly, the government ought to protect its citizens as far as possible, here, as well as in all contagious diseases. The whiskey trade is a fearful evil in this land of ours, and it is destroying, with the aid and sanction of the government, State and National, thousands of the best of citizens annually. Yet, in the face of all this, sober, intelligent men will contend to the bitter end for the rights of the saloon and trade at large; and some of these very men, at the same time advocate the cause of the poor inebriate; that it is the duty of the State to care for him, and provide a place where he may be treated, and, if possible, cured. This seems to me to be philanthropy gainsaid—advocating evil that good may come, or give rise to an opportunity to do good. But I close. Pardon me for troubling you on this line; but I do think that the profession might do much towards staying and mitigating the whiskey evil, if properly awakened to the enormity of it.

Jackson—Dr. J. M. Candler, Dillsboro. There have been reported four cases of scarlatina, three of diphtheria, four of typhoid fever and one of hemorrhagic malarial fever. The sanitary condition of the county and public buildings is good. But it has been very warm, and I expect typhoid fever unless a change occurs.

Johnston—Dr. L. L. Sasser, Smithfield. Malarial troubles have prevailed in these parts. Five cases of typhoid and one of pernicious malarial fever have been reported. There has been a slight epidemic of hog-cholera. The sanitary condition of the county and public buildings is good.

Jones—No Board of Health.

Lenoir—D. C. B. Woodley, Kinston. Intermittent fever has been reported from portions of the county lying on the river. There has occurred one case of typhoid fever.

Lincoln—Dr. W. L. Crouse, Lincoln. There have been reported ten cases of diphtheria and twenty-five of typhoid fever. Typhoid has prevailed in all parts of the county. Except for more typhoid than usual, the sanitary condition is very good; that of the jail and poor-house is good.

Macon—Dr. J. M. Lyle, Franklin. There have been reported ten cases of diphtheria and one of typhoid fever. The general health of the county is good. Sanitary condition of the public buildings is good.

Madison—No board of health

Martin—Dr. W. H. Harrell, Williamston. No report.

McDowell—Dr. J. H. Gilkey, Marion. Distemper has been epidemic among cattle. The sanitary condition of the county has been good; only one case of typhoid fever reported, and very little sickness of any kind has occurred. The sanitary condition of public buildings is good.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. There have been reported six cases of whooping-cough and four of typhoid fever. Influenza has prevailed in all parts of the county. Sani-

tary condition of the county is good; that of the jail and alms-house is good. The keeper of the poor is now building a new house near his old one, which will add greatly to the comfort and healthfulness of the inmates.

Montgomery—Dr. F. E. Asbury, Asbury. There have been reported ten cases of diphtheria, twenty of typhoid fever, five of pernicious and two of hemorrhagic malarial fever. The sanitary condition of the county is not very good at present. There has been an epidemic of cholera among domestic animals. There is still talk of improvements at the jail, but I cannot tell how long it will be.

Moore—Dr. Gilbert McLeod, Carthage. Three cases of measles and four of typhoid fever have been reported. The sanitary condition of the county is good; also that of the public buildings.

Nash—Dr. G. W. Lewis, Spring Hope. There have been reported fifteen cases of whooping-cough and five of typhoid fever. Whooping-cough has prevailed in all parts of the county. The sanitary condition of the county is good, however we had more sickness during September than August. In addition to the above, we have had some malarial fever. Our jail and poor-house are in good condition. We have a brick jail, well ventilated, and well heated in cold weather.

New Hanover—Dr. F. W. Potter, Wilmington. There have been reported sixteen cases of whooping-cough, one of diphtheria, and six of typhoid fever. Whooping-cough has prevailed in nearly all portions. The sanitary condition of the county has been good, though a few cases of typhoid and malarial fever existed in the early part of the month. I have directed the free use of lime and copperas on the low and damp places in the streets, and that the health officers use, or have used, disinfectants, etc., freely, on the premises of our suburban citizens (especially), or on the lots of those who do not look after such things. I distribute disinfectants to the jail, poor-house, and a good many families where there are a large number of children. All the public buildings are in good sanitary condition.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. E. L. Cox, Jacksonville. There are reported two cases of measles, six of typhoid fever, two of pernicious and one of hemorrhagic malarial fever. Remittent and intermittent fevers have prevailed in all portions of the county. There has been an epidemic of pemphigus among children. The sanitary condition of the county is good. Chicken-cholera has prevailed in some portions, and there are a few cases of staggers among horses. The sanitary condition of the public buildings is good.

Orange—Dr. D. C. Parris, Hillsboro. Typhoid fever has prevailed in the central part of the county—ten cases being reported. It was of rather a severe type. Malarial fevers, of mild type, have also prevailed. Throat diseases have been mild in type. Sanitary condition of the poor-house fairly good; that of the jail not good. There is some effort being made to improve the sewerage at the jail. Sanitary condition of other public buildings fairly good. Typhoid fever has prevailed more extensively than for any previous month, and with greater severity. We have had only meagre reports from the surrounding vicinity, and doubtless many cases have occurred of which we know nothing. As best we can determine, there are no local causes, and conclude there must be some general cause—namely, the long continuance of wet weather and absence of sunshine. Typho-malarial fever is reported to have been prevalent in the southern part of the county. Influenza has occurred in almost all portions, but not severe in form.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. Hog-cholera has been epidemic in most parts of the county. Reform is much demanded in drinking-water, and drainage. Neglect in these vital points of health, united with uncleanliness and filth, continue prolific causes of typhoid fever and other avoidable diseases. Sanitary education is a great want in families, and in all our public and private schools. All

along this line is an inviting field for thought and action to every intelligent physician who is alive to his duty. September has been rather a sickly month in Pender.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. Malarial and typhoid fevers have prevailed in almost all sections. Whooping-cough has been quite extensive in the southern part of the county. There have been a few cases of pink-eye, staggers and distemper among horses. There have been seen one case of croupous pneumonia and several cases of acute bronchitis.

Polk—Dr. Henry Shankle, Mills' Spring. No report.

Randolph—Dr. J. M. Boyette, Ashboro. Typhoid fever has prevailed in Randleman and Caraway. The sanitary condition of the county is very good. In some portions there are piles of decaying vegetable matter being heaped up by overflow of the creeks during the wet weather of last summer. Hog-cholera has been epidemic in Caraway. The sanitary condition of jail is very good; that of the poor-house not so good—caused from want of sufficient labor, consequently the weeds have grown up all over the grounds, and there are many little things that could be done that would make the inmates more comfortable.

Richmond—Dr. J. M. Covington, Rockingham. There have been reported twenty-eight cases of whooping-cough, one of scarlatina, four of diphtheria, and sixteen of typhoid fever; also malarial fevers of mild type have prevailed in some portions. The sanitary condition of the county and public buildings is good. Steps have been taken recently to improve the condition of the jail.

Robeson—Dr. R. F. Lewis, Lumberton. The sanitary condition of the county is good; no sickness scarcely. The public buildings are in fair sanitary condition.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. A few cases of typhoid fever and a few cases of malarial disease have prevailed in Salisbury and some portions of the county. The county

in general seems to be in good sanitary condition, and malarial diseases, which are so common in many localities, have been much less than usual. The houses of the Home, as well as the court-house and jail, are in good sanitary condition.

Rutherford—Dr. W. A. Thompson, Cliffdale. Measles, whooping-cough and typhoid fever have prevailed in portions. The sanitary condition of the county is good; also that of the public buildings.

Sampson—Dr. J. A. Stevens, Clinton. There has been an epidemic of hog-cholera. I have to report malarial and typhoid fevers, diarrhoea and dysentery, tonsillitis and catarrhal troubles. More typhoid fever in the county than I have ever known before. The sanitary condition of the jail is about as good as the old wooden structure will admit; that of the poor-house is excellent.

Stanly—Dr. P. D. Whitley, Plyler. Bronchial troubles and diarrhoea have prevailed. There have been reported one case of typhoid and pernicious malarial fever. During the first two weeks of the month we had cold rains, which were the cause of an abundance of bronchitis, etc. We also had considerable bowel troubles. Typhoid fever has about subsided. In my practice from April 1st to September 1st, there were twenty cases with only one death. The poor-house is in good condition; that of the jail bad. Its condition is so repulsive, that I think it will deter persons from committing crime from the dread of having to stay in such a place. [Is no one ever put into that jail for a *supposed* crime, and proved innocent when he has been given a hearing at Court?]

Stokes—Dr. W. V. McCanless, Danbury. No report.

Surry—No Board of Health.

Swain—Dr. R. L. Davis, Bryson City. The sanitary condition of the county is fairly good. No sickness of any kind at present, and only six cases of typhoid fever to report for the past month. The sanitary condition of the public buildings is only fairly good, and no steps are being taken to improve it.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. No report.

Union—Dr. W. C. Ramsay, Monroe. Typhoid fever has prevailed in several parts of the county—(12 or 15 cases in Monroe)—and five deaths reported. A few cases of diphtheria reported, with two deaths. Tonsillitis has been quite general, but mild. The sanitary condition of the poor-house is good; that of the jail bad—making preparations to build a new jail.

Vance—Dr. A. Cheatham, Henderson. The sanitary condition of the county is very good; also that of the public buildings.

Wake—Dr. James McKee, Raleigh. The sanitary condition of the county is very good. The weather has been very good, hence the improvement. The condition of the public buildings is most excellent—we do not see how it could be improved.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. No report.

Wayne—Dr. John Spicer, Goldsboro. There have been reported two or three cases of measles and one of diphtheria. The sickness is mostly malaria. There has been an epidemic of hog-cholera. The sanitary condition of the public buildings is good.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. Malarial fever has prevailed in all portions of the county. There have occurred one case of pernicious and two of hemorrhagic malarial fever. The sanitary condition of the county is slightly improving; that of the town is not good, while that of the jail is very bad, and that of the poor-house very good. Our jail is entirely too full for any improvement soon.

Yadkin—Dr. T. R. Harding, Yadkinville. Typhoid fever has been epidemic in several portions of the county for three months, but is growing milder with fewer new cases. A few cases of diphtheria of mild form have occurred.

Our people are using more disinfectants. The sanitary condition of the jail is not very good; that of the poor-house is bad at present, but our Commissioners have bought land in the country and will erect good buildings by February.

Yancey—Dr. J. L. Ray, Burnsville. The sanitary condition of the county has been very good. Have had a few cases of typhoid fever. The jail has been recently covered, and is kept only moderately clean. No inmates in the poor-house.

Condition of Jails and Poor-houses by Counties for September, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	6				36a			
Alexander.....	0				11	500	0	3
Alleghany.....					11			0
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....	18	1,000		6	18	*		5
Burke.....	4	800	4	3	10	1,000	2	2
Cabarrus.....								
Caldwell.....					8	630		
Camden.....								
Carteret.....	1	*	0	1	0			
Caswell.....	9	400			23	1,000	9	
Catawba.....	8		5	7	24		9	6
Chatham.....	7				29			
Cherokee.....								
Chowan.....								
Clay.....								
Cleveland.....	12	684		5	24	997		4
Columbus.....	7	*		3	12	*		0
Craven.....								
Cumberland.....	6				16			
Currituck.....								
Dare.....								
Davidson.....								
Davie.....								
Duplin.....	1				15	*		
Durham.....	11	1,000		3	25b	1,000		5
Edgecombe.....	8	*	5	3	23	*	7	5
Forsyth.....								

*Space exceeds one thousand cubic feet. (a) Includes 12 in house of correction. (b) Includes 13 in house of correction.

Condition of Jails and Poor-houses by Counties for September, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....								
Gaston.....								
Gates.....								
Graham.....								
Granville.....	6	*	2	2	22	*	10	9
Greene.....	3	500		1	10	1,000		1
Guilford.....								
Halifax.....	10			3	53			7
Harnett.....								
Haywood.....								
Henderson.....								
Hertford.....								
Hyde.....								
Iredell.....	5	*			23	482		
Jackson.....	3	200	1	2	4	300	2	1
Johnston.....	4	*	2	3	11	1,000	4	3
Jones.....								
Lenoir.....	3							
Lincoln.....	15	500		10	20	500		5
McDowell.....	0				6	600	1	1
Macon.....	0				0			
Madison.....								
Martin.....								
Mecklenburg.....								
Mitchell.....	16				6			
Montgomery.....	4	200	1	2	13	200	3	4
Moore.....	3	*	0	1	8	*	1	3
Nash.....	4	*	1	2	34	800	8	9
New Hanover.....	21	600	10		21a	1,000	17	10
Northampton.....								
Onslow.....	3	*			4	*	1	1
Orange.....	2	512			28	*	14	12
Pamlico.....								

* Space exceeds one thousand cubic feet. a. Includes 1 in house of correction.

Condition of Jails and Poor-houses by Counties for September, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	4		3	3	4		2	2
Perquimans								
Person.....								
Pltt					21			
Polk								
Randolph.....	10	*	3	10	29	1,000	6	20
Richmond.....	12				6			
Robeson.....	19	372			10	720		
Rockingham.....								
Rowan.....	6	*		3	17	*		
Rutherford.....	5	*			28	800		
Sampson.....	3				22			
Stanly.....	3	*	0	1	14	800	0	1
Stokes.....								
Surry								
Swain.....	3							
Transylvania								
Tyrrell.....								
Union.....	6	*			15	*		2
Vance.....	10	935	3	2	15	*		2
Wake.....	22	*			106 α			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	6	952	0	1	4	*	0	0
Wilkes.....								
Wilson	(?)	*	3	4	(?)	*	7	6
Yadkin.....	2		0	2	21		0	7
Yancey	2	*	0	2	0			

* Space exceeds one thousand cubic feet. α . Includes 43 in house of correction.

Mortuary Report for September, 1891.

TOWNS AND REPORTERS.	Races.	Population.		Temporary Annual death Rate per 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All other Diseases.	Suicide.	Still-Born.	Total.	
		By Races	Total.	By Races	Tot.																By Races.	Deaths
Asheville..... } Dr. H. B. Weaver..... }	White Color'd	7,000 3,000	10,000	6.8 12.0	8.4	...	...	...	...	...	...	...	1	1	1	1	1	1	1	...	4 3	7 3
Charlotte..... } Dr. J. Scarr..... }	White Color'd	..........	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....
Durham..... } Dr. N. M. Johnson..... }	White Color'd	4,000 3,500	7,500	15.0 6.8	11.2	...	...	...	...	...	...	...	1	1	1	2	1	1	1	2	5 2	7 ...
Fayetteville..... } Dr. J. H. Marsh..... }	White Color'd	2,800 2,200	5,000	25.7 5.4	16.8	...	...	...	...	...	...	...	1	1	2	1	1	1	1	...	6 1	7 3
Goldsboro..... } Dr. John Spicer..... }	White Color'd	2,700 2,300	5,000	4.4 5.2	4.8	...	...	...	...	...	...	...	1	1	1	1	1	1	1	...	1 1	2 ...
Henderson..... } Dr. A. Cheatham..... }	White Color'd	2,256 2,000	4,256	5.3 24.0	14.1	...	...	...	2	...	...	...	1	1	1	1	1	1	1	...	1 4	5 3
Newbern..... } S. Fulcher, City Cl'k..... }	White Color'd	..........	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....
Oxford..... } Dr. Patrick Booth..... }	White Color'd	1,700 1,600	3,300	7.1 15.0	10.9	2	...	...	...	...	...	...	...	...	...	...	1	1	1	1	1 2	3 1
Raleigh..... } Dr. Jas. McKee..... }	White Color'd	8,000 7,000	15,000	7.5 5.1	6.4	1	1	...	...	...	...	...	1	...	...	2	1	2	2	...	5 3	8 8
Salisbury..... } Dr. J. J. Summerell..... }	White Color'd	3,500 1,800	5,300	10.3 26.6	15.8	3	...	...	...	...	...	...	1	...	...	...	2	2	2	1	3 4	3 7
Tarboro..... } Dr. D. Williams..... }	White Color'd	1,258 1,112	2,370	0.0 21.6	9.3	1	...	...	...	...	...	...	...	...	...	1	1	1	1	...	0 2	2 1
Warrenton..... } Dr. P. J. Macon..... }	White Color'd	1,050 950	2,000	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....
Wilmington..... } Dr. F. W. Potter..... }	White Color'd	9,000 12,000	21,000	9.3 29.0	20.6	1	4	...	...	...	...	...	1	2	1	1	3	3	10	4	7 29	36 25
Greensboro..... } Dr. E. R. Michaux..... }	White Color'd	..........	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....
Statesville..... } Dr. M. W. Hill..... }	White Color'd	2,000 500	2,500	12.0 24.0	14.4	...	...	...	...	...	...	...	...	...	1	1	1	1	1	...	2 1	3 3
Wilson..... } Dr. A. Anderson..... }	White Color'd	2,000 1,500	3,500	12.0 8.0	10.3	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	2 1	3 1
Hillsboro..... } Dr. D. C. Parris..... }	White Color'd	..... .....	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1 3	.....
Monroe..... } Dr. W. C. Ramsay..... }	White Color'd	..........	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....
Salem—S. W. Clin- nard, City Clerk..... }	White Color'd	..........	.....	.....	.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	.....

Meteorological Summary for North Carolina, September, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.)									Mean Humidity.	Total Precipitation.	No. of Days				Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range			Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	
Asheville.....	66.1	87	18	79.3	43	15	55.2	44	24.1	74.3	3.25	24	4	2	9	N.
Bakersville.....	65.9	89	23	79.2	46	18	65.9	43	13.3	.....	2.76	19	5	6	5	W.
Charlotte.....	72.3	90	17	82.1	57	15	62.5	33	19.6	77.0	0.76	18	9	3	5	N. E.
Chapel Hill.....	73.4	94	19	85.8	49	10	60.9	45	24.9	.....	1.38	.....	.....	.....	7	.....
Douglas.	69.0	89	25	81.8	45	10	56.2	44	25.6	.....	1.40	19	9	2	2	N. E.
Franklin.....	61.7	87	25	80.6	35	22	42.8	52	37.8	.....	4.00	15	2	13	5	S.
Hendersonville.....	65.1	82	19	73.6	51	17	60.4	28	13.2	81.7	4.97	12	9	8	5	W.
Kitty Hawk.....	73.5	87	19	77.8	62	22	69.2	25	8.6	.....	2.05	20	5	5	7	N. E.
Littleton.	70.9	94	19	83.5	45	9	57.8	49	25.7	.....	1.60	8	6	16	10	N. & N. E.
Lexington.....	70.0	92	18	83.2	51	15	59.8	41	23.4	83.0	1.18	24	3	3	5	E.
Lenoir.....	67.9	84	19	76.9	48	15	60.6	36	16.3	.....	3.10	.....	.....	.....	4	.....
Morganton.....	69.0	87	19	79.9	49	15	60.5	38	19.4	77.5	3.52	.....	.....	.....	7	.....
Mount Airy.....	68.3	98	28	80.9	45	15	55.7	53	25.2	.....	1.12	20	4	6	3	S. W.
Oak Ridge.....	69.6	87	19	80.3	46	10	58.9	41	21.4	90.1	1.46	11	12	6	7	N. E.
Pittsboro.....	71.1	88	8	80.9	55	27	61.3	33	19.6	.....	0.80	15	9	6	2	N. E.
Raleigh.....	72.0	89	22	81.3	51	10	62.8	38	18.5	82.3	1.76	18	5	7	5	N. E.
Southport.....	73.3	84	16	79.6	58	21	67.3	26	12.3	.....	5.04	13	9	8	11	N. W.
Southern Pines.....	71.8	92	20	85.6	47	10	57.9	45	27.7	.....	0.68	18	7	5	2	S.
Salisbury.....	73.3	88	19	80.0	60	10	66.6	28	13.4	.....	0.86	.....	.....	.....	3	.....
Weldon.....	71.7	91	19	82.3	48	10	61.1	43	21.2	.....	1.37	16	8	6	6	N.
Washington.....	75.2	97	19	83.0	55	10	61.3	42	21.7	79.6	3.43	18	3	9	10	N. E.
Wilmington.....	74.0	91	19	81.6	58	10	66.4	33	15.2	82.7	4.61	14	11	5	12	N. E.

STATE METEOROLOGICAL SUMMARY FOR SEPTEMBER, 1891.

Mean Barometer 30.17 inches; normal for September, 30.07.

Highest Barometer 30.44 inches on the 10th at Lynchburg, Va.

Lowest Barometer 29.86 inches on the 7th at Kitty Hawk.

Mean temperature 71.1 degrees; normal for September, 71.1 degrees.

Highest temperature 98 on the 28th at Mount Airy.

Lowest temperature 35 on the 22d at Franklin.

Average rain-fall 2.28 inches; normal for September 5.20 inches.

Greatest monthly rain-fall 4.97 inches at Hendersonville.

Least monthly rain-fall 0.55 inch at Concord.

Average number of cloudless days 17.

Average number of partly cloudy days 7.

Average number of cloudy days 6.

Average number of rainy days 6.

Prevailing wind direction, North east; average hourly velocity 5.2 miles.

Prevailing direction from many years' observations, North-east; average hourly velocity 7 miles.

BULLETIN

OF THE

NORTH CAROLINA BOARD OF HEALTH.

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THOMAS F. WOOD, M. D., *Secretary and Treasurer*, Wilmington.

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NOVEMBER, 1891.

No. 8.

VITAL STATISTICS IN NORTH CAROLINA,

During the past week a circular letter has been sent to the Mayor of each town in North Carolina having a population of 1,000 and upwards, setting forth the following:

There is no system of vital statistics in this State. The only semblance of such being the monthly reports sent to the State Board of Health from some ten or twelve towns in the State. Of these only a few send *regular* reports, and the great majority of them depend on the voluntary efforts of some unpaid individual to collect the data, and they have no ordinance *requiring* the registration of deaths. It is the earnest desire of the State Board of Health to correct this evil as far as in them lies, and to this end these letters have been sent out to the persons in charge of the municipal affairs throughout the State, asking their aid in the matter. These men, above all others, should have at heart the welfare of the towns and the State at large, and as there are no State laws enforcing the registration of mortality statistics, we must depend on the differ-

ent cities and towns to make their own ordinances.

A glance at the mortuary tables in the "Bulletin" of the Board of Health will lead one to notice at once the absence from these tables of such important towns as Charlotte, New Bern, Winston, Reidsville, Asheville, Concord, Elizabeth City, Washington, and a good many others which, though having a smaller population, are representative towns. These statistics are not only of importance to the Board of Health in their efforts to ascertain and remove the causes of disease and death in the State, and as a means of testing the results of sanitation; but one of the first things a prospective immigrant does, or should do, is to look into the death-rate of the place to which he is looking for a home for his family, and it is important and desirable that an accurate and official record be furnished for the information of this class.

When reports are received from towns only spasmodically, they are practically of little value, for a true estimate of the healthfulness of a place cannot be based on a death-rate calculated from a report that omits three or

four months in the year, and these, probably, the months of greatest mortality. And to be of the greatest value, it must be apparent that means are adopted *to enforce* the registration of every death that occurs within the corporate limits of the town, and the population should be definitely ascertained, not guessed at. These reports are not desired or published as an advertisement for towns offering inducements as health-resorts, but for scientific purposes—therefore we desire the actual death-rate, and not one that will be attractive to home-seekers merely.

We would, therefore, urge upon the mayors and the medical profession of the towns to which these letters have been sent, the importance of having their city or town council to pass ordinances that will *require* the registration of each death that occurs in the town with some *paid* official, a part of whose duty it should be to forward to this office, on the first of each month, a copy of all the registrations for the preceding month. This registration should embrace in each case the name, age, sex, race, time and cause of death, and should be endorsed by the attending physician or some other reliable person. These reports will be published in the "Bulletin," and used in making up the biennial report to the Governor.

In this enlightened day it is scarcely necessary, I hope, to call attention to the great value of such a record that has been carefully kept for a number of years. Why, frequent inquiries are received at this office for information on the mortuary statistics of the State, and we have to acknowledge, with shame, that they are so meagre and unreliable as to be of almost no value.

Can we not prevail on the profession and the city and town officials to give their interest and aid to this important matter, and with the new year of 1892 start a system of vital statistics, which, though it may be imperfect at first, will soon grow to such a state of perfection as to be of great and recognized value?

Write to the Secretary of the Board, Mr.

Mayor, for any information or suggestions you may desire, and he will give your letter prompt and personal attention.

THOMAS F. WOOD, M. D.,
Wilmington, N. C. *Secretary.*

RELATION OF DRINKING-WATER TO DISEASE.

Dr. Henry P. Walcott, of Cambridge, Mass., presented a communication on this subject to the Association of American Physicians. The question of the influence of drinking-water in producing disease has not yet been satisfactorily answered. There certainly seems to be a close connection, but it cannot always be proved. The chemical examination of the water is no new thing. It may be chemically impure, and then it is, of course, unfit for consumption; but it may be chemically pure and be just as dangerous, if not more so. Certain pathogenic or disease-producing bacteria, live and thrive in water, and these cannot be detected by chemical means. Also, water, which was so long considered free from danger, has been shown to contain disease-producing bacteria. The principal diseases spread by drinking-water are typhoid fever and Asiatic cholera. The former interests us the most at present. The bacilli of typhoid fever live and thrive in wells. Wells and pumps containing water which to the senses is pure, have been known to spread the disease to an alarming extent. Numerous instances of this are on record. The refuse of cities has been known to cause typhoid fever in cities below it on the same river, when that city uses the river water for consumption. The State of Massachusetts has appropriated a liberal sum for the investigation of the connection between drinking-water and disease, and in taking the towns of Lowell, Haverhill, and Lawrence, it has shown the intimate connection between typhoid fever and the condition of the Connecticut and Merrimac rivers. There is great need for a more general study of the water of this country.—*Medical Record.*

Review of Diseases Reported for October, 1891.

Bilious Fever—Reported from Sampson.

Bronchitis—From Iredell and Nash.

Catarrhal Fever—From Halifax, Orange and Union.

Chicken-cholera—From Halifax, Nash and Onslow.

Cholera Infantum—From Sampson.

Diarrhœa—From Stanly.

Diphtheria—From Alexander, Caldwell, Jackson, Lincoln, Macon, McDowell, Pitt, Randolph, Stokes, Union and Wake—11 counties.

Distemper—From McDowell and Randolph.

Dysentery—From Onslow, Orange and Sampson.

Hog-cholera—From Duplin, Johnston, Macon, Montgomery, Nash, Person, Randolph, Tyrrell and Wayne—9 counties.

Influenza—From Davidson and Orange.

Malarial Fever—From Caswell, Duplin, Granville, Greene, Halifax, Iredell, Johnston, Lenoir, Nash, New Hanover, Pender, Randolph, Rowan, Stanly, Wayne and Wilson—16 counties.

Malarial Fever (hemorrhagic)—From Martin.

Malarial Fever (pernicious)—From Pitt.

Measles—From Alamance, Carteret, Greene, Johnston, New Hanover, Orange, Rutherford, Stokes and Wayne—9 counties.

Meningitis (cerebral)—From Greene.

Pharyngitis—From Orange.

Pneumonia—From Caswell, Nash and Pitt.

Scarlatina—From Richmond and Wayne.

Sore Throat (ulcerated)—From Martin.

Tonsillitis—From Orange.

Typhoid Fever—From Alamance, Alexander, Anson, Burke, Caldwell, Catawba, Cleveland, Columbus, Duplin, Franklin, Granville, Iredell, Jackson, Johnson, Lincoln, Macon, Montgomery, McDowell, Nash, New Hanover, Onslow, Orange, Pender, Randolph, Richmond, Rowan, Rutherford, Sampson, Stanly, Tyrrell, Union and Vance—32 counties.

Typho-malarial Fever—From Anson, Bladen and Sampson.

Whooping-cough—From Burke, Catawba, Davidson, Iredell, Lincoln, Nash, New Hanover, Orange, Pitt, Randolph, Richmond, Rowan, Rutherford and Stanly—14 counties.

Summary of Vital Statistics for October, 1891.

(TWELVE TOWNS.)

	White.	Col'd.	Total.
Aggregate population.	40,100	35,300	75,400
Aggregate deaths.....	30	62	92
Temporary annual death-			
rate per 1,000.....	9.0	21.1	14.7
Deaths under 5 years old,			41

Causes of death.

Typhoid fever.....	1	0	1
Malarial fever.....	2	6	8
Diphtheria.....	3	0	3
Whooping-cough....	0	1	1
Consumption.....	4	8	12
Measles.....	0	0	0
Pneumonia.....	0	0	0
Brain diseases.....	0	1	1
Heart diseases.....	1	3	4
Neurotic diseases....	3	6	9
Diarrhœal diseases...	5	5	10
All other diseases....	9	23	37
Accident and violence	1	1	2
Suicide.....	0	0	0
Still-born.....	1	3	4
	30	62	92

Summary of Reports from County Superintendents for October, 1891.

Alamance—Dr. G. W. Long, Graham. The food and water served to the inmates of the poor-house and jail are wholesome, except I do not think the inmates at the home for aged and infirm and at the work-house get enough of lean meat. The superintendent of the home needs one good cook and one hand, at

least, to help and to wait upon those who cannot help themselves, nearly all of whom are in a helpless condition. I have urged the importance of this upon the Commissioners and some induce me to believe the admonition will soon be heeded. The sanitary condition of the buildings is about as good as could be expected, owing to faulty construction. There has been some typhoid fever, some catarrh and I have heard of measles. Comparatively speaking, there has been less sickness than usual at this season of the year.

Alexander—Dr. J. B. Watts, Taylorsville. There have occurred three cases of typhoid fever and several of diphtheria, the latter exclusively in Taylorsville. The sanitary condition of the county has been remarkably good. That of the public buildings about the same as at last report.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. Typho-malarial fever has prevailed in the town of Wadesboro and portions of the county. July and August were unusually healthy; in September and October a few cases of typho-malarial fever of very mild type appeared, all of the cases so mild as not to confine the patients to bed. No deaths except among the colored population and a few aged whites. Only one white death in Wadesboro during the present year. The poor-house has six rooms 18x20 feet, not ceiled or plastered. The jail is much improved; three improved steel cells with swinging cots and water-closets in each, water-pipes with drainage perfect throughout, air pure, no bad odors. An appropriation has been made for the erection of a new court-house.

Ashe—No Board of Health.

Beaufort—Dr. S. T. Nicholson, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No report.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. The sanitary condition of the county is good; it has improved since the last report. There have occurred one case of whooping-cough and two of typhoid fever. The sanitary condition of the public buildings is good.

Cabarrus—No Board of Health.

Caldwell—Dr. R. L. Beall, Lenoir. The sanitary condition of the county was never better—very little sickness of any kind reported—only one new case of typhoid fever and two of diphtheria. The sanitary condition of the jail and poor-house very good.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. The sanitary condition of the county is reasonably good. Measles has occurred. Sanitary condition of the public buildings is good.

Caswell—Dr. R. H. Williamson, Yanceyville. There have occurred intermittent and remittent fevers, typho-malarial fever and a few cases of typho-pneumonia. The general sanitary condition of the county is good, also that of the public buildings.

Catawba—Dr. G. H. West, Newton. There have been reported three cases of whooping-cough and seven of typhoid fever. The sanitary condition of the jail and poor-house is good.

Chatham—Dr. H. T. Chapin, Pittsboro. The sanitary condition of the county is very good with very little sickness for the past month. Our public buildings are in good condition.

Cherokee—Dr. J. F. Abernathy, Murphy. This county is entirely free from contagious diseases of any kind. All the febrile diseases incident to the heat of summer and autumn have subsided. The jail and hospital for this county is in a fair condition.

Chowan—No Board of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. There have been reported several cases of typhoid fever. The sanitary condition of the county and public buildings is good.

Columbus—Dr. Isaac Jackson, Whiteville. The sanitary condition of the county is very good, there having been reported only one case of typhoid fever. The sanitary condition of the public buildings is first-class.

Craven—Dr. Leinster Duffy, New Berne. No report.

Cumberland—Dr. S. H. Marsh, Fayetteville. No report.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Whooping-cough and influenza have prevailed. Sanitary condition of the county is good; less malaria than for years. We are having more influenza than ever before and in a more severe form. The sanitary condition of the public buildings is good, except the jail.

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. Hog cholera has prevailed in the southern part of the county. The sanitary condition of the county is good; but little sickness that can be attributed to local causes. There have been a few cases of typhoid and malarial fevers but they have not been general. Sanitary condition of the public buildings is good.

Durham—Dr. N. M. Johnson, Durham. The sanitary condition of the county is good; there are no epidemics. Our county poor-house has been much improved by building new quarters for the inmates.

Edgecombe—Dr. Donald Williams, Tarboro. There has been very little sickness in the county this month. The sanitary condition of the public buildings is good.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. Typhoid fever of a mild type has prevailed in the northern part of the county. The sanitary condition of the county is very good. I hear of but little sickness. Also that of the public buildings.

Gaston—Dr J. H. Jenkins, Dallas. No report.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. Patrick Booth, Oxford. Malarial fevers have prevailed in nearly all portions of the county, and typhoid fever has been reported. The sanitary condition of the county has improved. Excessive rains last spring and winter caused more malaria than usual. Our public buildings are in good sanitary condition. Court-house is being enlarged with fire-proof vaults, and the court-room enlarged and improved with better ventilation, etc.

Greene—Dr. E. H. Sugg, Snow Hill. Malarial fever has prevailed in the county. A few cases of measles and also three of acute cerebral meningitis have been reported. The sanitary condition of the county and public buildings is good. The jail has just been white-washed; there have been two cases of malarial fever there.

Guilford—Dr. E. R. Michaux, Greensboro. No report.

Halifax—Dr. A. B. Pierce, Weldon. Catarrhal fever, complicated with malaria, has prevailed in some portions of the county. There has been an epidemic of chicken-cholera. The general health of the county has been good. There has been some improvement in the buildings at the poor-house. Sanitary condition good. Jail same as last reported; health of the inmates good.

Harnett—No Board of Health.

Haywood—Dr. J. H. Way, Waynesville. No report.

Henderson—Dr. J. L. Egerton, Hendersonville. No report.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. There has been very little sickness of any kind in the county so far as known. Some fever—typhoid and malarial—bronchitis, catarrhal troubles, whooping-cough, etc. The sanitary condition of public buildings is right good.

Jackson—Dr. J. M. Candler, Dillsboro. Typhoid fever and diphtheria have prevailed. The sanitary condition of the county is very good. During the warm weather we had

fevers, but since frost they have disappeared. The sanitary condition of the public buildings is very good.

Johnston—Dr. L. L. Sasser, Smithfield. Malarial fevers have been reported as prevailing and there have occurred ten cases of measles and four of typhoid fever. There has also been a slight epidemic of hog cholera. The sanitary condition of the public buildings is good.

Jones—No Board of Health.

Lenoir—Dr. C. B. Woodley, Kinston. There has been very little sickness of any kind during the past month. A few cases of intermittent fever have occurred. The sanitary condition of the jail is very good. The Commissioners have been petitioned to build a poor-house but have as yet taken no action in regard to it, and the indigent are poorly cared for.

Lincoln—Dr. W. L. Crouse, Lincolnton. Five cases of whooping cough, two of diphtheria and ten of typhoid fever have been reported. The sanitary condition of the county has improved during the month of October, until now there is no sickness of any kind. There was no sickness in the jail or poor-house during the month.

Macon—Dr. J. M. Lyle, Franklin. Twelve cases of diphtheria and two of typhoid fever have been reported. Cholera has been epidemic among animals. The sanitary condition of the county is good. That of the public buildings is fairly good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. Ulcerated sore throat has prevailed in several portions of the county. Five cases of typhoid and one of hemorrhagic malarial fever have occurred. The ulcerated sore throat is of a severe type and is pronounced diphtheria, but does not show any diphtheritic membrane. I do not consider it of a malignant or contagious nature. The sanitary condition of the public buildings is good; the arrangements for the winter heating are good.

McDowell—Dr. J. H. Gilkey, Marion. Typhoid fever and diphtheria have prevailed quite extensively in some portions of the county, but

with these exceptions there has been but little sickness. There has been an epidemic of distemper among cattle, a great many dying. The sanitary condition of the public buildings is as good as the circumstances will allow, as the buildings are very inadequate and the inmates too much crowded for their comfort and health.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. No report.

Montgomery—Dr. F. E. Asbury, Asbury. There has been an epidemic of cholera among animals. The sanitary condition of the county is the best it has been for some time. That of the poor-house is good but the jail not so good.

Moore—Dr. Gilbert McLeod, Carthage. No report.

Nash—Dr. G. W. Lewis, Springhope. There have been reported 12 cases of whooping-cough and 5 of typhoid fever. Remittent fever has prevailed in various parts of the county. There has also been an epidemic of chicken-cholera and of hog-cholera. The sanitary condition of the county is fairly good. In addition to the above troubles, we have had some pneumonia and bronchitis. The latter comes on mostly as a complication of whooping-cough among children. Our jail and poor-house are in good condition.

New Hanover—Dr. F. W. Potter, Wilmington. The sanitary condition of the county has improved. I hear of very little sickness through the country. There have been reported four cases of measles, five of whooping-cough, and six of typhoid fever. The sanitary condition of the public buildings is good. There have been three or four cases of intermittent fever treated at the poor-house and one death of an epileptic while in a fit.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. E. L. Cox, Jacksonville. Dysentery has prevailed in certain portions of the county; and there has been an epidemic of chicken-cholera. Two cases of typhoid fever have been reported. The dysentery was of a malignant nature. Poor-house is in good sani-

tary condition; the jail does very well, but a number of window-panes are out and should be replaced.

Orange—Dr. D. C. Parris, Hillsboro. There have been reported two cases of measles, two of whooping-cough, and five of typhoid fever. The prevailing diseases for the month have been catarrhal fever (tonsillitis and pharyngitis), a few cases of dysentery in mild form, and one marked case of la grippe—proving fatal. The sanitary condition of the home is good, while that of the jail is not good. The sanitary condition of the county is good.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. There has been an epidemic of hog-cholera. There has been a more general prevalence of malaria in October and several months previous than for several previous years during the same period. Typho-malarial fever has also prevailed, but not so extensively as the malarial fever. Typhoid fever continues to prevail also.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. Whooping-cough and typhoid and malarial fevers have prevailed in many portions of the county, and one case of pneumonia has been reported. The sanitary condition of the county is better than since the month of June. Three cases of diphtheria and one of pernicious malarial fever have occurred. The sanitary condition of the public buildings is good.

Polk—Dr. Henry Shankle, Mills' Springs. No report.

Randolph—Dr. J. M. Boyette, Ashboro. Twenty cases of whooping-cough and four of typhoid fever have been reported. Malarial fever and whooping-cough have prevailed in many portions. There has been an epidemic of cholera and distemper among domestic animals. The sanitary condition of the county is good; that of the jail is also good, while that of the poor-house is very much improved under the management of our new superintendent. There is very little sickness among the inmates.

Richmond—Dr. J. M. Covington, Rockingham. Seven cases of whooping-cough, four of scarlatina, and three of typhoid fever have been reported. The sanitary condition of the county is good, and also that of the public buildings.

Robeson—Dr. R. F. Lewis, Lumberton. The sanitary condition of the county is fair—very little sickness has occurred. The poor-house building is a poor one. Efforts by the Superintendent of Health to secure a better one have been unavailing. Improvements are going on at the court-house. The sanitary condition of the jail is good.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. Four cases of whooping-cough, two of diphtheria and five of typhoid fever have been reported. The sanitary condition of the county has been good. On the river and creeks there has been some malarial disease, but less than usual. Our public buildings are in good sanitary condition. The court-house is under process of repair at present, and it is hoped that some improvements, a long time needed, will be made.

Rutherford—Dr. W. A. Thompson, Clifdale. There have occurred a few cases of measles, whooping-cough and typhoid fever. The sanitary condition of the county is good, considering the long drought. We need rain to wash away filth, etc. The sanitary condition of the public buildings is very good.

Sampson—Dr. J. A. Stevens, Clinton. Dr. J. F. Powell reports, since September 1st, 28 cases of typho-malarial fever, 8 of typhoid, 6 of bilious, 10 of dysentery, 14 of cholera infantum, and 3 of renal colic. Have had quite an epidemic through this section, but the fevers are subsiding.

Stanly—Dr. D. P. Whitley, Plyler. Whooping-cough has prevailed in the north-eastern part of the county, and one case of typhoid fever has been reported. The health of the county has been unusually good—some malarial fevers on the water-courses and diarrhoea among children are the only diseases. The sanitary condition of the public buildings is good.

Stokes—Dr. W. V. McCanless, Danbury. Fifteen cases of measles, three of diphtheria, and two of typhoid fever have been reported. The sanitary condition of the county is very good; that of the public buildings is fair. Our Commissioners are considering the erection of a house in connection with the poor-house for the confinement of the insane paupers.

Surry—No Board of Health.

Swain—No Board of Health.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. Nine cases of typhoid fever have been reported. The sanitary condition of the county was never better than at present, and sickness decreases in proportion as sanitary measures are adopted. There has been an epidemic of hog-cholera.

Union—Dr. W. C. Ramsay, Monroe. One case of diphtheria and two of typhoid fever have been reported. These, with catarrhal fevers have prevailed in some parts of the county. The sanitary condition of the county has greatly improved; that of the poor-house is good, while that of the jail continues bad.

Vance—Dr. A. Cheatham, Henderson. The sanitary condition of the county is good.

Wake—Dr. James McKee, Raleigh. One case of diphtheria reported. The sanitary

condition of the county is good. The weather has been unusually fine and the health of our people good. Sanitary condition of all public buildings good.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Wayne—Dr. John Spicer, Goldsboro. There has been an epidemic of hog-cholera. Sanitary condition of the county good. There have been some few cases of measles, scarlatina, malaria in its different forms, and the usual pulmonary troubles. Sanitary condition of the public buildings is good.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. Malarial fevers of mild type have prevailed. Sanitary condition of the county good; that of the home is good, while that of the jail is not at all good on account of overcrowding.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Ray, Burnsville. The sanitary condition of the county is good—only two cases of typhoid fever being reported. The public buildings are in moderately good condition.

Condition of Jails and Poor-houses by Counties for October, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	2				34			
Alexander.....	1	600	0	1	11	500	0	3
Alleghany.....								
Anson.....	5				9			
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....	3	600	2	2	10	1,000	2	1
Cabarrus.....								
Caldwell.....	4	715			8	630		
Camden.....								
Carteret.....	0				0			
Caswell.....	11	400		3	23	1,000	9	3
Catawba.....	9		3	5	28		0	8
Chatham.....	2				30			12
Cherokee.....	6				2			
Chowan.....								
Clay.....								
Cleveland.....	12	684		7	23	997		4
Columbus.....	3	*		1	11	*		
Craven.....								
Cumberland.....								
Currituck.....								
Dare.....								
Davidson.....	4	*	0	0	24	721	0	3
Davie.....								
Duplin.....	3				15	*		
Durham.....	2	1,000		1	24 ^a	1,000		5
Edgecombe.....	10	*	3	2	20	*	5	4
Forsyth.....								

*Space exceeds one thousand cubic feet. (a) Includes 16 in house of correction.

Condition of Jails and Poor-houses by Counties for October, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin	4				20			
Gaston								
Gates								
Graham								
Granville	7	*	3	2	24	*	10	9
Greene	3	500		1	10	1,000		1
Gulford								
Halifax	10			5	48			7
Harnett								
Haywood								
Henderson								
Hertford								
Hyde								
Iredell	12	985			23	525		
Jackson	2	200	1	1	4	200	2	2
Johnston	6	*	3	3	11	1,000	4	3
Jones								
Lenoir	2	*						
Lincoln	5	*			22	500		
McDowell	4	550	2	2	8	600	1	1
Macon	2	18(?)	1	2				
Madison								
Martin	3	1,000	0	1	13	500	2	3
Mecklenburg								
Mitchell								
Montgomery	4				13			
Moore								
Nash					34	800	8	7
New Hanover	18	600	12	8	19 ^a	1,000	16	9
Northampton								
Onslow	3	*	0	0	3	*	1	0
Orange	3		0	0	27		12	12
Pamlico								

* Space exceeds one thousand cubic feet. a. Includes 3 in house of correction.

Condition of Jails and Poor-houses by Counties for October, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	2		2	1	5		4	2
Perquimans								
Person.....								
Pitt	4				20			
Polk								
Randolph.....	4	*	1	3	29	800	6	16
Richmond.....	4				6			
Robeson.....	4	*			9	800		
Rockingham.....								
Rowan.....	11	700	0	3	18	*	0	0
Rutherford.....	6	*		2	23	700		5
Sampson.....								
Stanly.....	3	*	0	2	14	800	0	1
Stokes.....	4	600	2	2	10	500	2	2
Surry								
Swain.....								
Transylvania								
Tyrrell.....	2	*		1	1	*		
Union.....	4	*	0		15	*		2
Vance.....	11	850	4	4	14	*		5
Wake.....	13	*			109			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	3	952		0	4	*		
Wilkes.....								
Wilson	20	*			26	*		
Yadkin.....								
Yancey	1	*	0	1				

* Space exceeds one thousand cubic feet. a. Includes 51 in house of correction.

Meteorological Summary for North Carolina, October, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).									Mean Humidity.	Total Precipitation.	NO. OF DAYS				Prevalling Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range			Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	
Asheville.....	51.9	84	3	65.4	29	29	40.1	55	25.1	65.6	0.78	21	7	3	6	N.
Bakersville.....	50.6	80	1	64.3	22	29	36.8	58	27.5	.....	2.20	18	7	6	8	W.
Charlotte.....	56.8	88	5	67.1	31	28	46.6	57	20.5	68.0	0.68	19	6	6	6	N. E.
Chapel Hill.....	56.4	92	5	68.9	28	29	43.9	64	25.0	.....	1.58	.....	.....	.....	7	.....
Madison	50.7	85	4	66.5	26	27	35.1	59	31.4	.....	1.17	.....	.....	.....	3	.....
Hatteras	62.2	80	5	66.4	44	23	58.0	36	8.4	.....	7.74	13	8	10	8	N.
Hendersonville.....	51.7	76	4	59.9	31	29	44.9	47	15.0	78.6	0.10	12	11	8	1	W.
Kitty Hawk.....	60.3	84	5	66.3	40	23	55.1	44	11.2	.....	2.79	9	11	11	10	N. E.
Littleton	54.0	90	5	67.2	26	27	42.2	64	25.0	.....	2.89	16	5	10	10	N.
Linville.....	46.1	72	3	56.9	24	29	35.2	48	21.7	.....	1.10	.....	.....	.....	3	.....
Lenoir.....	52.6	81	4	62.7	29	29	44.6	52	18.1	.....	0.80	.....	.....	.....	3	.....
Morganton.....	53.7	80	5	66.4	28	29	43.8	52	22.6	71.6	0.56	.....	.....	.....	3	.....
Mount Airy.....	52.6	83	4	65.0	23	29	40.1	60	24.9	.....	1.04	19	6	6	2	S. W.
Oak Ridge.....	51.7	85	4	65.8	28	28	43.6	57	22.2	84.6	1.25	11	15	5	11	N. W.
Pittsboro	54.8	86	5	64.6	28	27	44.9	59	19.7	.....	1.50	15	6	10	5	N. E.
Raleigh	56.4	88	5	65.7	32	29	47.2	56	18.5	76.8	2.64	18	5	8	9	N.
Southport	60.4	80	4	67.9	36	28	53.0	34	14.9	.....	6.49	17	5	9	9	N.
Southern Pines.....	56.8	90	5	71.0	25	29	42.6	65	28.4	.....	2.11	21	3	7	5	W.
Salisbury	58.0	82	4	65.1	36	29	50.2	46	14.9	.....	1.14	.....	.....	.....	7	.....
Weldon	56.4	89	5	67.3	32	24	45.5	57	21.8	.....	6.10	14	8	9	9	N.
Saxon.....	54.0	85	4	66.4	24	28	41.5	61	24.9	.....	1.14	19	2	10	5	N. E.
Wilmington.....	60.6	89	5	69.5	36	29	51.7	53	17.8	79.0	6.01	15	10	6	9	N. E.

STATE METEOROLOGICAL SUMMARY FOR OCTOBER, 1891.

Mean Barometer 30.14 inches; normal for October, 30.09.

Highest Barometer 30.58 inches on the 30th at Hatteras.

Lowest Barometer 29.71 inches on the 4th at Kitty Hawk and Norfolk.

Mean temperature 55.9 degrees; normal for October, 60.7 degrees.

Highest temperature 92 on the 5th at Chapel Hill.

Lowest temperature 22 on the 29th at Bakersville.

Average rain-fall 2.51 inches; normal for October 4.17 inches.

Greatest monthly rain-fall 7.74 inches at Hatteras.

Least monthly rain-fall 0.10 inch at Hendersonville.

Average number of cloudless days 15.

Average number of partly cloudy days 8.

Average number of cloudy days 8.

Average number of rainy days 6.

Prevailing wind direction, North west; average hourly velocity 5.6 miles.

Prevailing direction from many years' observations, North-east; average hourly velocity 7.5 miles.

BULLETIN

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DECEMBER, 1891.

NO. 9.

SYNOPSIS OF "THE EXPERIMENTAL INVESTIGATIONS BY THE STATE BOARD OF HEALTH OF MASSACHUSETTS UPON THE PURIFICATION OF SEWAGE BY FILTRATION AND BY CHEMICAL PRECIPITATION AND UPON THE INTERMITTENT FILTRATION OF WATER, MADE AT LAWRENCE, MASS., 1888-1890. PART II. OF REPORT ON WATER SUPPLY AND SEWERAGE."

BY ROBERT KENNEDY, M. A., B. SC.,
M. B., GLASGOW.

The second part of the report on water supply and sewerage issued by the State Board of Health of Massachusetts in 1890 contains an account of extremely important investigations on the purification of sewage. The greater part of the report is devoted to the investigations on the filtration of sewage, and in addition to the section relating to the chemical precipitation of sewage, there are also sections dealing with the filtration of water, the chemical and the biological work

of the Station, and with some special investigations on the nitrifying organism.

The specially important part is that relating to the filtration of sewage. The method of filtration, which has been investigated, is the "intermittent," as distinguished from the "continuous." By intermittent filtration is meant the application to the filter of small quantities of sewage at certain periods only, while during the intervals the surface of the filter remains dry. In continuous filtration, on the other hand, the surface of the filter is constantly covered with sewage. In the case of continuous filtration, the power of the filter to purify depends upon its capacity to act as a strainer to keep back suspended matter, while, with regard to dissolved impurities, these will not be held back by such a filter, but will be as great in the effluent as in the sewage applied. Further, the impurities removed by this method remain in the filter, and, if such a filter is to continue to do good work, it must be periodically cleaned. It is,

however, quite different in the case of intermittent filtration. The investigations have shown that the results are not dependent on the capacity of the filter to act as a mechanical strainer, but on its power to favor chemical and vital changes in the sewage as it passes through. When the sewage has been applied to the surface of the filter in small quantity, it sinks down and spreads itself over the particles of the filter in thin films. When it has disappeared from the surface, air has free access, and thus the sewage is exposed in thin films to the action of the air. It appears that under these conditions oxidation of the organic impurities takes place, and not only of the suspended organic impurities, but also of those in solution; and by the time that the sewage reaches the outlet of the filter, it is, in the case of many of the filters used in the investigations, purer as to organic matter than many drinking waters. The nature of the change which takes place in the filter is essentially one of oxidation of the nitrogenous impurities. These are present in the sewage as free ammonia in solution, and as albuminous bodies partly in solution and partly in suspension, their quantity being shown by the albuminoid ammonia. By oxidation the albuminoid ammonia is first liberated to free ammonia by the oxidation of the carbon, and next the free ammonia is oxidized to nitrites, and these in their turn to nitrates, which is the ultimate product, and appears in the effluents as nitrates of the alkalis. This entire process is dependent on the presence of oxygen in the filter, as has been shown by the investigations. In one of the filters means were taken to prevent the entrance of air, during the process of intermittent filtration, with the result that purification almost at once was arrested, the filter acting simply as a mechanical strainer. The first part of the chemical change, namely, the conversion of albuminoid ammonia into free ammonia, seems to depend only on the presence of oxygen, but the second part, namely, the nitrification process, requires, in addition to the presence of oxygen, also the presence of

micro-organisms. This was well illustrated in all the filters, when operations were first commenced. Air was present in these filters abundantly, but yet for about two months or longer no nitrification occurred, simply because the nitrifying organisms had not yet become established in their work. Although, however, no purification by nitrification occurred at this early stage, yet the chemical analyses of the effluents showed that much of the albuminoid ammonia had been converted into free ammonia. Thus, by oxidation alone, much of the organic matter is converted into inorganic by the oxidation of carbon; but, for the complete process, the vital action of micro-organisms is necessary. By this process of intermittent filtration, also, the organic matter removed from the sewage is not stored in the filter as in the case of continuous filtration. It is still present in the effluent, but in the innocuous form of nitrates. Thus, such a filter, if properly managed, will continue to purify sewage for an indefinite time, no cleaning being necessary, the only condition being that the amount of sewage added shall be adapted to the capacity of the filter. If too much sewage is added, then the filter through time becomes clogged, the process of nitrification not being able to purify more than a certain quantity, and, if the filter becomes clogged, this interferes with the due admixture of sewage and air, with the result that the process of nitrification may cease altogether.

The fact that intermittent filtration does not depend on the filter being a mechanical strainer, and that the organic matter removed is not stored, is illustrated by the experiments, which were made by filtering sewage through five feet of gravel about the size of beans. Sewage was applied to this in small quantities, nine times a day, at the rate of 81,400 gallons per acre per day, for about nine months. During the latter part of this time 98.6 per cent. of the organic matter was being removed by nitrification, and 99 per cent. of the bacteria. During three months immediately after this, the quantity of sewage applied was increased to 126,600 gallons

per acre per day, by applying it in small quantities hourly, for 14 hours daily, with the result of removing 98.5 per cent. of organic matter as nitrates, and 99.6 per cent. of the bacteria. The effluent from this filter was chemically better than many drinking waters, the only chemical indication that it came from sewage being the high chlorides and nitrates, both of which are innocuous. In spite of all this purification, none of the organic matter was stored in the filter, the gravel being found to be as clean at the end of the year as it was at the beginning.

In intermittent filtration, the activity of nitrification has also a relation to the number of bacteria which pass through into the effluent. Although the material used as a filter may be composed of very coarse gravel, the number of bacteria which will pass through is, as has been seen by the example just quoted, extremely small. In most of the filters which were employed, the number of bacteria coming through in the effluent fell considerably when the process of nitrification commenced.

The sewage which was used at the Station was brought by a pipe which tapped the main sewer of the City of Lawrence at a point above the entrance of streams from manufacturing works, and thus was ordinary sewage, and that from a population of about 10,000 people. If the sewage had contained acids discharged from works, it might have modified the results. Investigations which were made by adding sulphuric acid to the sewage showed that after some time nitrification was stopped, from which it was concluded that if acid comes only occasionally in the sewage, it will do no harm, but, if it is to come constantly, it must first be neutralized by lime or other alkali before being applied to the filters. The sewage obtained from the main sewer in this way contained roughly 998 parts of pure water, one part of mineral matter, and one part organic matter, and of these impurities one-half were in suspension, and one-half in solution, and the average number of bacteria were 700,000 per cubic centimetre.

It was the object of the investigations to find what materials are best adapted for the purification of this sewage by filtration, and, in order to find this, a number of tanks were filled with different materials to act as filters. Sands of various degrees of fineness, gravels, river silt, soil, and peat were employed.

Filtration through five feet of good garden soil proved a failure. The organic matter which it contains probably swells up, and interferes with the perviousness of the filter. After some little time this filter did not purify at all, and although only 5,000 gallons per acre per day were added, yet the surface was always covered with sewage, so that it was really continuous filtration. Such a filter, while it keeps back bacteria, will not purify chemically. Peat also proved a failure for filtration, being even worse than soil. The surface of such a filter would be kept constantly covered by a quantity of sewage less than the average rain-fall.

Soil may, however, form a good filter, if it covers sand to the depth of about half a foot. Experiments were made with a filter consisting of three feet eight inches of coarse and fine sand and gravel, covered by ten inches of yellow sandy loam, resting upon which was six inches of brown soil. With this filter excellent purification was got, the sum of the ammonias of the affluent being 0.4 per cent. of those of the sewage, and the bacteria of the effluent being only 0.001 per cent. of those of the sewage. The quantity of sewage, however, which can be filtered in such is small, being the equivalent of about 9,000 gallons per acre per day.

The most satisfactory results were got from filters composed of sands. Experiments were made with coarse mortar sand, mixed fine and coarse sand and gravel, fine sand, and fine river silt. Among these nitrification first commenced and first reached an established condition in the coarse sands, next in the mixed sand, next in the fine sands, and finally in the silt. After these had continued purifying for from one to one and a half years, the following are the results which were being yielded: The coarse sand filters were able to purify the

largest quantities of sewage. Thus, one of these was filtering at the rate of 60,000 gallons per acre per day, and giving an effluent containing only 0.4 per cent. of the sum of the ammonias of the sewage and only 0.02 per cent. of its bacteria. The fine sands filtered about half this quantity of sewage with an equal purification, as shown by the sum of the ammonias, but with only 0.003 per cent. of the bacteria of the sewage, while the river silt filtered less than a quarter of the quantity applied to the coarse sand, giving an effluent containing 0.6 per cent. of the sum of the ammonias of the sewage, and containing only 0.002 per cent. of the bacteria. The mixed sands and gravel were filtering about two-thirds of the quantity applied to the coarse sands with satisfactory purification.

The condition of these filters showed that they would probably continue to do their work indefinitely, with at most a raking over of the upper inch, where, under certain conditions, a slight deposit may form.

In the case of coarse sands there is apt to be a slight interference with the regularity of the results, from the fact that shortly after a fresh application of sewage there may be for a short time a less pure effluent from some of the sewage reaching the outlet quickly by pushing past the liquid already in the filter.

With regard to the bacteria, a few of these are said to come through the coarse filters, but none through the finer sands. This is of importance, if it is proposed to run the effluent into a stream from which drinking-water supplies are drawn, as, although only a very few come through, some of these might be pathogenic, and might possibly, under favorable conditions, multiply in the effluent or stream. Bacteria are found in the effluents from fine sand filters, but these are believed not to have come through the filter, but to have come from the under-drains. On these grounds, it is pointed out that in the case of sewage being filtered on the banks of a stream used for drinking-water supplies, a large sandy area covered with fine soil, or a smaller area of very

fine sand is to be preferred to a still smaller area of mixed sand and gravel or of coarse sand; because, by the former, bacteria would be excluded. If, on the other hand, the stream is not used for drinking-water, the latter is preferable from the larger quantity which may be applied.

In the account of the investigations by Mr. Jordan and Mrs. Richards on the nitrifying organism, it is shown that this organism does not grow on gelatin, the usual medium for the cultivation of bacteria. It is found in ammoniacal solutions in a condition resembling *zoöglœa*, very similar to the *zoöglœa* which is always to be found in the filters when nitrification is active. These organisms of nitrification come in the sewage, and seem to exert a destructive influence on the bacteria of the sewage in the filter; but the details of the process have not yet been clearly defined. The other microscopical organisms which are found in sewage—namely, *algæ*, and fungi, and protozoa—are also destroyed in the filters; although a few, and perhaps the spores and ova, may possibly from time to time be carried through. Yeast cells, which are always found in the sewage in large numbers, are destroyed in the filters within a few inches of the top, apparently from the action of the bacteria.

In the section of the report which deals with the chemical precipitation of sewage, it is shown to what extent purification by this means can be effected by the best precipitants. Experiments were made with lime, copperas, alum, and ferric sulphate, which were employed either alone or in combination. The quantity of each necessary to give the best results, the best proportions in which to combine them when used together, and the cost, are the points which are carefully determined; but the value of the sludge as manure is not considered.

In the case of lime it is shown that a definite quantity is required, depending on the composition of the sewage, that quantity being the amount which will neutralize the carbonic acid; and no better results are got by using

more. The amount of lime which is required for the Lawrence sewage is 1,800 pounds to 1,000,000 gallons of sewage; and, 100 gallons daily being the amount of sewage for each inhabitant, they calculate that the treatment of this quantity would cost about 1s. 2d. annually, the price which they pay for the lime being about 36s. per ton.

In order to compare the value of the different processes, experiments were made in which quantities of the different precipitants, which would cost about 1s. 2d. to treat 100 gallons daily for one year, were employed. The amount of purification is calculated from the amount of albuminoid ammonia removed after settling for one hour. A table of results, including also the amount of purification when no precipitant is used, and when the sewage is filtered through filter paper, and when it is purified by intermittent filtration, is given in the report. The following is a rearrangement of that table:

<i>Per 1,000,000 gals. of Sewage.</i>	<i>Albuminoid Ammonia removed.</i>
270 lbs. of ferric oxide used as ferric sulphate.....	59 per cent.
1,000 lbs. copperas and 700 lbs. of lime	57 "
1,800 lbs. lime	52 "
650 lbs. alum	51 "
No precipitant—merely allowed to settle.....	21 "
Filtered through paper.....	39 "
Filtered intermittently through 4 or 5 feet of sand.....	98 "

This comparison will be, of course, altered by variations in the prices of the chemicals, and by the nature of the sewage treated.

When one-third more of alum and of ferric oxide are employed, they remove respectively 56 per cent. and 64 per cent. of the albuminoid ammonia, but larger quantities than this will not give results much better.

The average of all the experiments showed that the proper mixture of copperas and lime was able, at the cost of about 1s. 2d. yearly per 100 gallons of sewage daily, to remove 58

per cent. of the albuminoid ammonia; lime alone, at the same cost, 55 per cent.

The number of bacteria remaining in the effluents after such treatment is about five per cent. of those of the sewage, while by intermittent filtration only a very small fraction of one per cent. is found in the effluent. Although, however, 95 per cent. are thus removed, there is so much organic matter remaining in the effluent that the five per cent. of bacteria remaining may very soon multiply enormously.

From the fact of the imperfect degree of purification, together with the cost of chemicals and the expense of manipulation and disposal of the sludge, it is not thought that the treatment of sewage by chemical precipitation will ever be widely adopted; unless the conditions for intermittent filtration do not exist, and the effluents from the chemically precipitated sewage can be turned into a rapidly flowing stream.

Summary of Mortuary Reports for November, 1891.

(TWELVE TOWNS.)

	<i>White.</i>	<i>Col'd.</i>	<i>Total.</i>
Aggregate population.....	41,000	35,160	76,170
Aggregate deaths.....	48	51	99
Representing annual death-rate per 1,000.....	14.0	17.4	15.6
Deaths under 5 years old.....			33
<i>Causes of death.</i>			
Typhoid fever.....	2	1	3
Malarial fever.....	2	0	2
Whooping-cough.....	3	0	3
Pneumonia.....	5	4	9
Consumption.....	4	10	14
Brain diseases.....	3	1	4
Heart diseases.....	1	4	5
Neurotic diseases....	3	2	5
Diarrhoeal diseases...	2	2	4
All other diseases....	14	25	39
Suicide.....	1	0	1
Still-born.....	8	2	10
	48	51	99

Review of Diseases Reported for November, 1891.

Bronchitis—Was reported from Alexander, Caldwell, Johnston and Sampson.

Catarrhal Fever—From Alamance, Halifax, Martin and Orange.

Chicken-cholera—From Pender, Randolph and Wilson.

Hog-cholera—From Cherokee, Columbus, Granville, Haywood, Johnston, Macon, Pender, Randolph, Tyrrell, Wayne, Wilson—11 counties.

Cholera Infantum—From Caldwell.

Diphtheria—From Davidson, Henderson, Jackson, Macon, Montgomery, New Hanover, Onslow, Rowan and Union—9 counties.

Dysentery—From Martin.

Epidemic—From Haywood.

Influenza or La Grippe—From Caldwell, Caswell, Cherokee, Davidson, Granville, Guilford, Macon, Orange, Randolph, Richmond and Rowan—11 counties.

Jaundice—From Alamance, Caldwell and Randolph.

Malarial Fever—From Chatham, Granville, Guilford, Iredell, Pitt, Sampson and Wilson—7 counties.

Malarial Fever (hemorrhagic)—From Martin, New Hanover and Onslow.

Measles—From Chatham, Martin, Mitchell, Pitt and Wake—5 counties.

Parotiditis—From Halifax.

Pneumonia—From Caldwell, Caswell, Guilford, Iredell, Mitchell, Randolph, Sampson and Swain—8 counties.

Rheumatism—From Alexander.

Scabies—From Greene.

Scarlatina—From Montgomery and Swain.

Tonsillitis—From Alexander, Caldwell, Halifax, Mitchell and Union—5 counties.

Typhoid Fever—Alamance, Burke, Caldwell, Catawba, Columbus, Iredell, Jackson, Macon, McDowell, Mitchell, Montgomery, New Hanover, Orange, Pitt, Richmond, Sampson, Tyrrell, Union, Wayne and Yancey—20 counties.

Varicella—From Guilford.

Whooping-cough—From Cleveland, Davidson, Granville, Iredell, Montgomery, New Hanover, Pitt, Randolph, Rowan and Wake—10 counties.

Summary of Reports from County Superintendents for November, 1891.

Alamance—Dr. G. W. Long, Graham. There is a furious epidemic of catarrh throughout the county and a case or two of typhoid fever. Also of jaundice. The sanitary condition of the public buildings is as good as usual.

Alexander—Dr. J. B. Watts, Taylorsville. There have been a few cases of bronchitis, tonsillitis and rheumatism reported in different sections of the county. The sanitary condition of the county has been good. That of the public buildings is fair. There are no efforts at improvement, though the condition of the public buildings is by no means perfect.

Ashe—No Board of Health.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Beaufort—Dr. S. T. Nicholson, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. The sanitary condition of the county is very good, with very little sickness for the month. There have been reported six cases of typhoid fever. The sanitary condition of the public buildings is as good as could be expected for such structures.

Cabarrus—No Board of Health.

Caldwell—Dr. A. A. Kent, Lenoir. Influenza has prevailed in all parts of the county.

There have also been a few cases of pneumonia, bronchitis, tonsillitis, typhoid fever, jaundice, and cholera-infantum. The poor-house is in good condition; the jail bad.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. The sanitary condition of the county is good. Our public buildings are old, but comfortable and clean.

Caswell—Dr. R. H. Williamson, Yanceyville. La grippe and pneumonia have prevailed in all parts of the county. The sanitary condition of the county and public buildings is good.

Catawba—Dr. G. H. West, Newton. Six cases of typhoid fever have been reported. The public buildings are in good sanitary condition.

Chatham—Dr. H. T. Chapin, Pittsboro. The sanitary condition of the county is very good. With the exception of a few cases of measles and intermittent fever, there has been little sickness during the month. The public buildings are well cared for.

Cherokee—Dr. J. F. Abernathy, Murphy. La grippe, with fever of a continued form, has prevailed with great severity in portions of the county, with one death as a result. Hog cholera has prevailed all over the county. I am glad to say that our jail is in the hands of a new guardian and is kept neat and clean.

Chowan—No Board of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. Five cases of whooping-cough have been reported. The health of the county has been extremely good.

Columbus—Dr. I. Jackson, Whiteville. The sanitary condition of the county is good; there has been reported but one case of typhoid fever. Hog cholera has been epidemic in some parts of the county. The sanitary condition of the public buildings is good.

Craven—Dr. Leinster Duffy, New Berne. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county and pub-

lic buildings is tolerably good. The court-house and jail need improvement badly, but nothing has been done as yet.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Influenza and whooping-cough have prevailed. The sanitary condition of the county is good. La grippe has prevailed extensively and in severe form; some diphtheria has also occurred in one section. No change in the sanitary condition of the public buildings,

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. The sanitary condition of the county is very good, with little sickness of any kind reported. The sanitary condition of the public buildings is very good.

Durham—Dr. N. M. Johnson, Durham. The sanitary condition of the county is very good.

Edgecombe—Dr. Donald Williams, Tarboro. The health of the county is very good. The sanitary condition of the public buildings is good.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. From all accounts the health of the county was never better. The sanitary condition of the jail is good. I have been Superintendent of Health, ever since the passage of the act creating the Board of Health, and during that time there has been but one case of sickness in our jail. The poor-house is equally good.

Gaston—Dr. J. H. Jenkins, Dallas. No report.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. Patrick Booth, Oxford. Influenza and whooping-cough have prevailed in different parts of the county. There has also been a slight epidemic of hog cholera. The sanitary condition of the county is fairly good, but might be improved by draining and more attention to wells and cellars. The

sanitary condition of the public buildings is good; the poor-house has been improved by the liberal use of whitewash.

Greene—Dr. E. H. Sugg, Snow Hill. Malarial fever has prevailed in the county, but there has been comparatively little sickness. Quite a number of cases of scabies reported. The sanitary condition of the public buildings is good.

Guilford—Dr. E. R. Michaux, Greensboro. There has been a great deal of sickness during November. Have had a number of cases of la grippe many of them having pneumonia as a sequel. Some malarial diseases, also a few cases of varicella. Comparatively few deaths. La grippe has been especially severe with old people—more so than usual. The sanitary condition of the public buildings is quite good, except the jail, which is only fair. There is an effort at improvement in that those in the city will be connected with sewerage at an early day.

Halifax—Dr. A. B. Pierce, Weldon. Catarrhal fever has prevailed in many portions of the county. The health of the county has been good; some cases of tonsillitis and parotiditis reported—remarkable exemption from malarial fevers. The condition of the poor-house has improved—more room provided and more attention paid to sanitary measures. Condition of the jail same as last reported.

Harnett—No Board of Health.

Haywood—Dr. J. H. Way, Waynesville. Mild catarrhal affections of the respiratory tract have prevailed. There have been a number of cases of cholera among hogs and a few cases of epizootic in horses. The sanitary condition of the jail is not good. In October, I went before the commissioners and urged some action in the matter: It will be hard to remedy the defects in the present building. The general opinion is that when the Legislature meets and orders a levy of a special tax, we will have a new jail.

Henderson—Dr. J. L. Egerton, Hendersonville. One case of diphtheria reported. The sanitary condition of the county is good; a

good system of sewerage is being laid in the town. The public buildings are in good sanitary condition.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. Whooping-cough and typhoid fever reported. The sanitary condition of the county has been excellent. I have heard of a case of pneumonia and death, and a few cases of intermittent fever; also some catarrhal troubles. The public buildings are in good condition. The court-house needs ventilation, and the jail needs ventilation and a good system of sewerage.

Jackson—Dr. J. M. Candler, Dillsboro. The sanitary condition of the county is very good; two cases of diphtheria and four of typhoid fever reported. The sanitary condition of the public buildings is also good.

Johnston—Dr. L. L. Sasser, Smithfield. Bronchial and pulmonary troubles have prevailed. There has been a slight epidemic of hog cholera. The sanitary condition of the county and public buildings is good.

Jones—No Board of Health.

Lenoir—Dr. C. B. Woodley, Kinston. There have been no diseases dangerous to the public health reported, nor have any occurred in the Superintendent's practice during the month.

Lincoln—Dr. W. L. Crouse, Lincolnton. No report.

Macon—Dr. J. M. Lyle, Franklin. Four cases of diphtheria and one of typhoid fever reported. La grippe has prevailed in some parts. There has been an epidemic of cholera among hogs everywhere. The sanitary condition of the county and public buildings is good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. The sanitary condition of the county is fair. There have been reported about forty cases of measles and one of hæmorrhagic malarial fever. Measles and catarrhal fever have prevailed in all portions of the county. The sani-

tary condition of the public buildings is exceptionally good—not overcrowded, well ventilated and heated. A few cases of dysentery reported. Have heard of the existence of diphtheria in the lower part of the county, but doubt the truth of the report.

McDowell—Dr. J. H. Gilkey, Marion. Typhoid fever and catarrhal troubles have prevailed in some portions of the county. The sanitary condition of the county is very good. The sanitary condition of the jail is fairly good, that of the home very bad owing to its crowded condition, but arrangements are being made to erect additional buildings.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. Tonsillitis has prevailed in nearly all portions of the county. Have heard of two cases of measles and one of typhoid fever. The sanitary condition of the county is very good. I have heard of only one case of pneumonia and one case of other fever. So much wet weather is a precursor of considerable sickness. The keeper of the poor-house has just completed a house which is a very commodious and durable building, and will be greatly beneficial to the inmates in the way of comfort and room. No improvement yet at the jail, but it is in fair condition.

Montgomery—Dr. F. E. Asbury, Asbury. There have been reported five cases of whooping-cough, four of scarlatina, six of diphtheria and three of typhoid fever. The sanitary condition of the county is not very good. No efforts toward improving the public buildings. There is still talk of building a new jail. The sanitary condition of the poor-house is good.

Moore—Dr. Gilbert McLeod, Carthage. No report.

Nash—A Board of Health has been organized with Dr. J. J. Mann, Nashville, as Superintendent of Health.

New Hanover—Dr. F. W. Potter, Wilmington. The number of deaths in the city is smaller than for the same month in any of the preceding six years. Only two deaths from strictly malarial origin. Whooping-cough and

typhoid fever are subsiding. There have been reported sixteen cases of whooping-cough, one of diphtheria, four of typhoid fever and one of hæmorrhagic malarial fever. The catarrh that was prevalent among horses is subsiding. Whooping-cough has been quite prevalent on the coast, but, with this exception, the sanitary condition of the county is good. The public buildings are in good condition.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. E. L. Cox, Jacksonville. The sanitary condition of the county is good. There have occurred one case of diphtheria and one of hæmorrhagic malarial fever. The sanitary condition of the poor-house is good, and of the jail fair.

Orange—Dr. D. C. Parris, Hillsboro. Catarrhal fevers have prevailed in all portions of the county. They have been rather severe, but so far are amenable to treatment. La grippe occurs rather seldom and does not complicate catarrhal troubles. There have been two cases of typhoid fever reported. The sanitary condition of the public buildings is fairly good. Buildings at the home are being repaired. Rheumatism, meningitis, bronchitis and la grippe have occurred. La grippe is not severe so far, though one death is reported. All the cases of typhoid fever have recovered. The sanitary condition of our county, so far as drainage and other local conditions are concerned, is good.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. Cholera has been epidemic among hogs and chickens. There has been less typhoid and malarial fever in November than in any summer or fall month this year. Still, owing to the operation of avoidable causes of disease in defective drinking-water, bad cooking imperfect ventilation, neglect of personal hygiene and drainage, sickness prevails all over the county.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. Whooping-cough, measles, typhoid fever and malarial fevers reported. The sanitary condition of the county is better than it has been in several months. That of the public buildings is good.

Polk—No Board of Health.

Randolph—Dr. J. M. Boyette, Ashboro. Thirteen cases of whooping-cough and four of typhoid fever reported. Besides these, jaundice has prevailed in several townships. Cholera has been epidemic with hogs and chickens in some townships. The sanitary condition of the county is good. Pneumonia and la grippe seem to be epidemic, reports coming from all parts of the county. The poor-house is in excellent condition. The jail is also in excellent condition.

Richmond—Dr. J. M. Covington, Rockingham. Eight cases of typhoid fever reported. Besides these, influenza of mild type has been reported. So far as I can learn, the sanitary condition of the county is good; also that of the public buildings.

Robeson—Dr. R. F. Lewis, Lumberton. The county is in fair sanitary condition; there being very little sickness. The sanitary condition of the public buildings is fair. Work is progressing upon the court-house.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. Whooping-cough, diphtheria and influenza in mitigated form have prevailed. The sanitary condition of the county is as usual. Salisbury shows an increased death-rate among the negroes; among the whites the usual low death-rate. Our streets are being macadamized, but too late for the best results. The sanitary condition of the public buildings is good. The court-house was recently repaired and improved.

Rutherford—Dr. W. A. Thompson, Cliffdale. The sanitary condition of the county is good and very healthy indeed. Also that of the public buildings.

Sampson—Dr. J. A. Stevens, Clinton. I have to report pneumonia, influenza, bronchitis, malarial and typhoid fevers. I hear of a great many cases of typhoid fever in the lower part of the county and several deaths. The sanitary condition of the public buildings is good. Our jail is without an inmates and has been for several weeks.

Stanly—Dr. D. P. Whitley, Plyler. No report.

Stokes—Dr. W. V. McCannless, Danbury. No report.

Surry—No Board of Health.

Swain—Dr. R. L. Davis, Bryson City. Three cases of scarlatina have been reported. The sanitary condition of the county is better than it has been for several years. Besides the scarlatina, which was of mild type, there were only two cases of pneumonia. The public buildings are in a bad condition, and no efforts are being made to better them.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. There has been very little sickness; two cases of typhoid fever being reported. Hog cholera has been epidemic in some portions. The sanitary condition of the public buildings is poor, with no efforts at improvement.

Union—Dr. W. C. Ramsay, Monroe. Diphtheria and typhoid fever have prevailed in some parts of the county. The sanitary condition of the county is generally good. Colds and mild cases of tonsillitis are common. The sanitary condition of the poor-house is good, jail inferior. A new jail will be erected.

Vance—Dr. A. Cheatham, Henderson. No report.

Wake—Dr. James McKee, Raleigh. Two cases of measles and one of whooping-cough have been reported. The sanitary condition of the county is remarkably good; fewer cases of sickness and lower death-rate than in four years. The sanitary condition of all public buildings is remarkably good.

Warren—Dr. P. J. Macon, Warrenton.

No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone.

No report.

Wayne—Dr. John Spicer, Goldsboro. Six or eight cases of typhoid fever have been reported. There has been an epidemic of hog cholera in some parts of the county. The sanitary condition of the county and public buildings is good.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. Malarial fevers, colds and bronchitis have prevailed. Cholera has been epidemic with hogs and chickens. The sanitary condition of the county is good; that of the poor-house is good; that of the jail only ordinary, and that means some improvement on the last month.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Ray Burnsville. Five cases of typhoid fever reported. The sanitary condition of the county and public buildings is very good.

Condition of Jails and Poor-houses by Counties for November, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	6 (a)				35			
Alexander.....	1	300	0	1	11	500	0	3
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....	3	600	2	2	10	1,000	2	1
Cabarrus.....								
Caldwell.....	4			4	8	630		2
Camden.....								
Carteret.....	0				0			
Caswell.....	2	1,000		1	24	1,000	9	3
Catawba.....	8		4	5	28		9	15
Chatham.....	1				29			12
Cherokee.....	9	910		8	3	720		1
Chowan.....								
Clay.....								
Cleveland.....	12	684		7	23	997		4
Columbus.....	7	*		2	10	*		0
Craven.....								
Cumberland.....	3				15			
Currituck.....								
Dare.....								
Davidson.....	4	*	0	0	24	721	0	2
Davie.....								
Duplin.....	5				16	*		
Durham.....	7				33 (b)			
Edgecombe.....	7	*	4	2	22	*	6	3
Forsyth.....								

*Space exceeds one thousand cubic feet. (a) Includes 5 in house of correction. (b) Includes 16 in house of correction.

Condition of Jails and Poor-houses by Counties for November, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	4			2	20			3
Gaston.....								
Gates.....								
Graham.....								
Granville.....	9	*	3	2	21	*	10	8
Greene.....	2	500		1	9	1,000		1
Guilford.....	21	594			34	*		
Halifax.....	11			4	48			8
Harnett.....								
Haywood.....	7		0	6				
Henderson.....	0				1			
Hertford.....								
Hyde.....								
Iredell.....	11	*			24	462		
Jackson.....	3	200	1	2	4	200	2	2
Johnston.....	8	*	4	3	11	1,000	3	3
Jones.....								
Lenoir.....	4	*						
Lincoln.....								
McDowell.....	3	550	2	0	11	500	2	1
Macon.....	2	*	0	1				
Madison.....								
Martin.....	3	1,000	2	3	13	700	0	2
Mecklenburg.....								
Mitchell.....	1				6			
Montgomery.....	7				16			
Moore.....								
Nash.....								
New Hanover.....	18	600	12	6	20	1,000	14	11
Northampton.....								
Onslow.....	1	*	0	1	3	*	1	0
Orange.....	0	512			28	*	13	11
Pamlico.....								

* Space exceeds one thousand cubic feet.

Condition of Jails and Poor-houses by Counties for November, 1891. (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....								
Perquimans								
Person.....								
Pitt					23			
Polk								
Randolph.....	4	*	2	2	27	569	6	6
Richmond.....	7				6			
Robeson.....	3	*			9	800		
Rockingham.....								
Rowan.....	10	750		5	19	*		
Rutherford.....	4	*			24	800		
Sampson.....	0				25			
Stanly.....								
Stokes.....								
Surry								
Swain.....	0							
Transylvania								
Tyrrell.....	2	*		1	2	*		0
Union.....	4	*			15	*		2
Vance.....								
Wake.....	16	*			110 (a)			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	3	952	0	0	4	*	0	0
Wilkes.....								
Wilson	8	*	1	2	22	*	7	6
Yadkin.....								
Yancey	2	*	0	1				

* Space exceeds one thousand cubic feet. a. Includes 50 in house of correction.

Mortuary Report for November, 1891.

TOWNS AND REPORTERS.		Races.	Population.		Representing Annual death Rate per 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All other Diseases.	Accid't & Violence.	Suicide.	Still-Born.	Total.		Deaths under 5 yrs
By Races	Total.		By Races	Tot.	By Races.	By Towns.																			
Asheville.....	White																								
	Color'd																								
Charlotte.....	White																								
	Color'd																								
Durham.....	White	4,000	7,000	6.0	5.1									1								1	2	3	1
Dr. N. M. Johnson.....	Color'd	3,000		4.0										1								1	1		
Fayetteville.....	White	2,800	5,000	12.8	16.8									1								1	3	10	1
Dr. J. H. Marsh.....	Color'd	2,200		38.2										2	1	1		3				7			
Goldsboro.....	White	2,800	5,000	17.2	12.0									1				1				1	4	5	1
Dr. John Spicer	Color'd	2,200		5.5														1				1	1		
Henderson	White																								
	Color'd																								
Newbern	White																								
	Color'd																								
Oxford.....	White	1,700	3,300	14.1	10.9														1			1	2		
Dr. Patrick Booth	Color'd	1,600		7.5															1			1	1	3	1
Raleigh.....	White	8,000	15,000	13.5	14.4			1					1					5				2	9		
Dr. Jas. McKee.....	Color'd	7,000		15.4										2				6				9		18	10
Salisbury	White	2,850	4,500	21.1	29.3	1				2									1	1			5		
Dr. J. J. Summerell.....	Color'd	1,650		43.6														6				6	11	6	
Tarboro.....	White	1,260	2,370	0.0	5.1																	0		1	
Dr. D. Williams.....	Color'd	1,110		10.8														1				1			
Warrenton	White																								
	Color'd																								
Wilmington.....	White	9,000	21,000	18.7	18.8			1		1			2	3	3				3		1	14	33	10	
Dr. F. W. Potter.....	Color'd	12,000		19.0	1								2	3	1	2	2	1	5			2	19		
Greensboro.....	White	4,000	6,000	12.0	12.0								3					1				4	6		
Dr. E. R. Michaux ..	Color'd	2,000		12.0														2				2			
Statesville.....	White	2,000	2,500	12.0	19.2	1								1		1					1	2	4	1	
Dr. M. W. Hill.....	Color'd	500		48.0																	2				
Wilson.....	White	2,000	3,500	12.0	13.7									1				1			1	2	4	2	
Dr. A. Anderson.....	Color'd	1,500		16.0														1				2			
Hillsboro.....	White	600	1,000	20.0	12.0													1				1		1	
Dr. D. C. Parris	Color'd	400		0.0																	0				
Monroe.....	White																								
	Color'd																								
Salem	White																								
	Color'd																								

Meteorological Summary for North Carolina, November, 1891.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr).									Total Precipitation.	No. of Days				
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range		Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	Prevailing Wind.
Asheville.....	44.3	73	8	55.6	13	30	33.8	60	21.8	62.8	3.60	15	6	9	7 N. & N.W.
Bakersville.....	40.9	69	1	54.6	9	29	27.2	60	27.4	.....	2.63	18	3	9	3 W.
Charlotte.....	47.8	78	1	57.1	19	30	38.4	59	18.7	69.4	3.05	16	5	9	10 N. E.
Chapel Hill.....	47.0	80	2	60.4	13	29	33.5	67	26.9	.....	3.12	.....	.....	8	.....
Douglas	42.6	73	1	60.0	13	29	25.3	60	34.7	.....	2.40	11	7	11	4 N.W.
Hatteras .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hendersonville.....	43.2	68	1	52.1	14	19	36.3	54	15.8	73.5	8.00	14	5	11	2 N.W.
Kitty Hawk.....	51.2	71	1	56.6	28	18	45.8	43	10.8	.....	2.23	9	8	13	11 N. E.
Littleton	46.4	76	9	60.6	9	15	32.2	61	28.4	.....	1.99	18	10	2	9 N.
Lexington.....	47.1	78	1	58.7	16	19	35.5	62	23.2	76.3	2.90	17	6	7	6 N. E.
Lenoir.....	42.7	71	1	51.2	15	30	36.5	56	14.7	.....	4.50	.....	.....	4	.....
Morganton.....	45.0	75	1	56.0	12	19	35.5	63	20.5	71.1	4.75	.....	.....	8	.....
Mount Airy.....	42.4	74	1	53.5	10	19	31.2	64	24.3	.....	2.43	.....	.....	5	S. W.
Oak Ridge.....	45.7	78	22	56.9	16	19	34.5	62	22.4	87.5	3.33	8	13	9	9 N.
Pittsboro	45.8	76	11	55.6	16	19	36.0	60	19.6	.....	2.55	15	6	9	6 N. E. S. W.
Raleigh	47.8	76	1	57.2	17	30	38.2	59	19.0	78.0	3.71	16	3	11	7 N.
Southport	52.3	72	5	60.5	25	30	44.1	47	16.4	.....	2.08	13	11	6	7 N.
Southern Pines.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salisbury	48.6	74	1	56.7	23	18	40.6	51	16.1	.....	3.41	.....	.....	6	.....
Weldon	48.1	77	1	59.4	16	30	36.8	61	22.6	.....	2.07	15	7	8	8 N.
Washington.....	51.9	79	1	64.5	24	30	39.3	55	25.2	77.9	2.38	16	5	9	7 N.W.
Wilmington.....	53.0	78	1	62.3	25	30	43.4	53	18.9	76.2	1.46	13	9	8	9 N. E.

STATE METEOROLOGICAL SUMMARY FOR NOVEMBER, 1891.

Mean Barometer 30.20 inches; normal for November, 30.16.

Highest Barometer 30.89 inches on the 19th at Charlotte.

Lowest Barometer 29.34 inches on the 23rd, at Lynchburg, Va.

Mean temperature 47.1 degrees; normal for November, 50.6 degrees.

Highest temperature 82 on the 2d at Chapel Hill.

Lowest temperature 5, on the 18th, at Linville.

Average rain-fall 3.09 inches; normal for November 3.51 inches.

Greatest monthly rain-fall 10.79 inches at Linville.

Least monthly rain-fall 0.77 inch at New Berne.

Average number of cloudless days 13.

Average number of partly cloudy days 8.

Average number of cloudy days 9.

Average number of rainy days 7.

Prevailing wind direction, North; average velocity 7.8 miles per hour.

Prevailing direction from many years' observations, North-east; average hourly velocity 7.6 miles

ELISHA MITCHELL SCIENTIFIC SOCIETY.

CHAPEL HILL, N. C.

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JANUARY, 1892.

No. 10.

THE Illinois Live Stock Committee decided that lumpy jaw in cattle is contagious, and renders the meat unfit for human food. A convention of cattle raisers further West, the other day, resolved that lumpy jaw is not contagious and does not render the meat unfit for human food.—*Medical Record*.

What provision is made in North Carolina to protect the people from having sold to them by unscrupulous money-makers meat that is unsound or unwholesome, either imported or native.

A NEW vaccination law came into operation in Italy on January 1, 1892. All children except those who have already had small pox, or who are medically certified to be in ill health, must be vaccinated within the solar half-year subsequent to the date of their birth; and where renewal of any such certificate of unfitness is in question, the child must be inspected by the official vaccinator, with whom the final decision will rest. Lymph is supplied by the government.

Summary of Mortuary Reports for December, 1891.

	(ELEVEN TOWNS.)		
	White.	Col'd.	Total.
Aggregate population .	38,900	35,000	73,900
Aggregate deaths	32	55	107
Representing annual death-rate per 1,000,	16.0	18.8	17.4
Deaths under 5 years old,			39
<i>Causes of death.</i>			
Pneumonia	13	8	21
Consumption	1	2	3
Brain diseases	4	0	4
Heart diseases	10	5	15
Neurotic diseases	2	2	4
Diarrhoeal diseases . . .	1	2	3
All other diseases	17	28	45
Accident	0	1	1
Still-born	4	7	11
	52	55	107

EVERY case of typhoid fever is a case of water-poisoning. This is a useful item for the public to keep in mind.—*Medical Record*.

Review of Diseases Reported for December, 1891.

Bronchitis—Reported from Caldwell, Granville, Iredell, Johnston, Lincoln, McDowell, Montgomery and Stanly—8 counties.

Chicken-cholera—From Pender.

Hog-cholera—From Alexander, Macon, Montgomery and Pender.

Diphtheria—From Montgomery, Onslow and Pender.

Distemper—From Greene, McDowell, Mitchell and Northampton.

Influenza, or La Grippe—From Alamance, Alexander, Burke, Caldwell, Carteret, Caswell, Catawba, Chatham, Cherokee, Cleveland, Columbus, Cumberland, Durham, Franklin, Granville, Greene, Henderson, Iredell, Johnston, Lenoir, Lincoln, McDowell, Montgomery, Moore, New Hanover, Onslow, Orange, Richmond, Robeson, Rowan, Rutherford, Stanly, Stokes, Union, Wake and Wilson—36 counties.

Malarial Fever (pernicious)—From Lenoir.

Measles—From Carteret, Randolph and Rutherford.

Mumps—From Davidson.

Pneumonia—From Caldwell, Caswell, Cleveland, Granville, Greene, Iredell, Lenoir, McDowell, Montgomery, Moore, Orange and Rowan—12 counties.

Rheumatism—From Iredell and Lincoln.

Rubeola—From Richmond.

Typhoid Fever—From Alexander, Burke, Caldwell, Catawba, Greene, Macon, Randolph, Stanly, Wilson and Yancey—10 counties.

Varicella—From Iredell.

Whooping-cough—From Caldwell, Carteret, Davidson, Granville, Iredell, Lenoir, New Hanover, Randolph and Wilson—9 counties.

Summary of Reports from County Superintendents for December, 1891.

Alamance—Dr. G. W. Long. Graham. Influenza and epidemic catarrh has prevailed furiously throughout the county. A number of

our people have died from it. The public buildings are about as usual.

Alexander—Dr. J. B. Watts, Taylorsville. There have been reported several cases of la grippe and one of typhoid fever. The sanitary condition of the county is about as usual at this season. There has been an epidemic of cholera among swine. There have been no changes in the sanitary condition of the public buildings since last report, except some improvements about the well at the poor-house.

Alleghany—No Board of Health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Ashe—No Board of Health.

Beaufort—Dr. S. T. Nicholson, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brutuswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. The sanitary condition of the county is good. A few cases of grippe and pneumonia and one of typhoid fever have been reported. The sanitary condition of the public buildings is good.

Cabarrus—No Board of Health.

Caldwell—Dr. A. A. Kent, Lenoir. Grippe has prevailed in all portions of the county. There have been reported also six cases of whooping-cough and three of typhoid fever. There have not been a large number of cases of grippe. Whooping cough is prevailing in the town of Lenoir. There have been a number of cases of pneumonia and one death; also considerable bronchitis and tonsillitis. The sanitary condition of the public buildings is fairly good.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. The sanitary condition is fair. Influenza has prevailed quite extensively throughout the county, but so far we have had no deaths. Measles and whooping cough have occurred. The sanitary condition of the public buildings is good.

Caswell—Dr. R. H. Williamson, Yanceyville. The sanitary condition of the county is good. Influenza, pneumonia, and typhoid pneumonia have prevailed. The sanitary condition of the public buildings is good.

Catawba—Dr. G. H. West, Newton. La grippe has prevailed in all sections of the county. Four cases of typhoid fever have been reported. The jail and poor-house are in good sanitary condition.

Chatham—Dr. H. T. Chapin, Pittsboro. The sanitary condition of the county has been good. Considerable la grippe prevailed in the latter part of the month. The public buildings are in good condition.

Cherokee—Dr. J. F. Abernathy, Murphy. La grippe with all its variations has been with us this month, and two deaths have resulted. No other maladies of any gravity. Jail and hospital are in fair sanitary condition. The new court-house is a model in a sanitary view as well as in architectural beauty.

Chowan—No Board of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. La grippe and pneumonia have prevailed in all parts of the county. The sanitary condition of the county is good. A new \$10,000 jail, with all modern improvements, has just been completed.

Columbus—Dr. Isaac Jackson, Whiteville. Our county is very healthy. Influenza has prevailed in a mild form, but could not be considered an epidemic. The sanitary condition of the public buildings is good.

Craven—Dr. Leinster Duffy, New Bern. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. La grippe has prevailed in many portions of the county. The sanitary condition of the county and public buildings is tolerably good.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Whooping-cough and mumps have prevailed in scattered portions of the county. The sanitary condition of the public buildings is good.

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. No report.

Durham—Dr. N. M. Johnson, Durham. La grippe has prevailed in many portions of the county. It struck our town about the 15th of December with some increased severity over last year, though it is abating very much in severity and prevalence now. The sanitary condition of the public buildings is very good. The quarters for the poor and the work-house are excellent now, since new ones have been built.

Edgecombe—Dr. Donald Williams, Tarboro. The health of the county is very good.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. La Grippe has prevailed in every section of the county. With this exception there is very little sickness. It is in nearly every instance easily controlled and is rarely complicated. So far there has been no case in any public building.

Gaston—Dr. J. H. Jenkins, Dallas. No report.

Graham—No Board of Health.

Granville—Dr. Patrick Booth, Oxford. La grippe has been epidemic all over the county. Some cases of bronchitis and pneumonia. There were a few cases of whooping-cough at the orphan asylum, but it was abated by isolation. The sanitary condition of the public buildings is good.

Greene—Dr. E. H. Sugg, Snow Hill. La grippe has prevailed, and there have been reported a few cases of pneumonia and typhoid fever. There has also been an epidemic of distemper. The sanitary condition of the county and public buildings is good.

Guilford—Dr. E. R. Michaux, Greensboro. No report.

Halifax—Dr. A. B. Pierce, Weldon. No report.

Harnett—No Board of Health.

Haywood—Dr. J. H. Way, Waynesville. No report.

Henderson—Dr. J. L. Egerton, Hendersonville. La grippe has prevailed in nearly all portions of the county. The sanitary condition

of the county is good. The jail is of modern construction, and is in good condition.

Hertford—No Board of Health.

Hyde—No Board of Health.

Issell—Dr. M. W. Hill, Statesville. We have had a few cases of the following diseases: Pneumonia, bronchitis, whooping-cough, varicella, la grippe, rheumatism, neuralgia, colds and tonsillitis. There is very little sickness as far as known.

Jackson—Dr. J. M. Candler, Dillsboro. No report.

Johnston—Dr. L. L. Sasser, Smithfield. Bronchial troubles and influenza have prevailed. The sanitary condition of the county and public buildings is good.

Jones—No Board of Health.

Lenoir—Dr. C. B. Woodley, Kinston. Five cases of whooping-cough and one of pernicious malarial fever have occurred. La grippe and pneumonia have prevailed in La Grange section, and la grippe in mild form in all portions of the county. The jail is in very good sanitary condition; we have no poor-house.

Lincoln—Dr. W. L. Crouse, Lincolnton. La grippe has prevailed in all portions of the county, also bronchial and rheumatic troubles. The public buildings are in good sanitary condition.

Macon—Dr. J. M. Lyle, Franklin. Only one case of typhoid fever reported, and the sanitary condition of the county is good. There has been an epidemic of hog cholera. The sanitary condition of the public buildings is good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. No report.

McDowell—Dr. J. H. Gilkey, Marion. Influenza has prevailed quite extensively, complicated in some instances with pneumonia and bronchitis, but no fatal cases so far. No other serious sickness. There has been an epidemic of distemper. The sanitary condition of the jail is fair, that of the poor-house very bad, owing to the crowded condition of the inmates. We are urging the county authorities to provide better accommodations for the poor.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. The sanitary condition of the county is good; no epidemic has prevailed in any part of the county among our people. There has been an epidemic of distemper. The sanitary condition of the public buildings is very good. Poor-house has been somewhat improved, but steps are being taken to improve the condition of the jail.

Montgomery—Dr. F. E. Asbury, Asbury. Influenza has prevailed in all parts of the county. There have been three hundred cases reported, and in that number there were one hundred cases of bronchitis and pneumonia. Almost everybody is sick with influenza. There have been reported also five cases of diphtheria. Hog cholera has been epidemic. The public buildings are about as last reported.

Moore—Dr. Gilbert McLeod, Carthage. Influenza has prevailed all over the county. There has been very little sickness in the county except la grippe, complicated in some instances by pneumonia. Six or eight deaths have been reported from it. Otherwise the sanitary condition of the county is good, also that of the public buildings.

Nash—Dr. J. J. Mann, Nashville. No report.

New Hanover—Dr. F. W. Potter, Wilmington. Influenza has prevailed in all portions of the county, about two hundred cases having been reported. There have also occurred about forty cases of whooping-cough. The grippe prevailed, especially on the seacoast, but has not proven fatal. There has been an epidemic of influenza here among the horses resulting in the death of three or four by pneumonia, but it has now subsided. The public buildings are all in good condition.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. E. L. Cox, Jacksonville. La grippe has prevailed in all parts of the county, and there has been one case of diphtheria. The sanitary condition of the poor-house is good; that of the jail not so good, but have ordered it put in a better condition.

Orange—Dr. D. C. Parris, Hillsboro. There is quite a prevalence of la grippe and pneumonia and several have died, but none have died in our town. Congestive pneumonia complicates a large proportion of the grippe cases, and this class proves most fatal. Nineteenths of the sickness among our people in this section now, except the chronic cases, are throat and pulmonary diseases. The sanitary condition of the jail is not good; that of the poor-house is good, and some improvements are being made. Other public buildings are fairly good.

Pamlico—No Board of Health.

Pasquotank—No Board of health.

Pender—Dr. S. S. Satchwell, Burgaw. During the year 1891 there has been an improvement in the sanitary condition of the county. Better attention is given to ventilation, drinking-water and diet, and the laws of health generally are better observed. All this is telling well upon the public health. The drainage of our jail is neglected. My efforts to promote cleanliness have not been successful. We need a better jailor. There has been an epidemic of cholera among hogs and chickens.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. No report.

Polk—No Board of Health.

Randolph—Dr. J. M. Boyette, Asheboro. There have been reported five cases of measles, twenty-one of whooping-cough, one of diphtheria and three of typhoid fever. Reports from the western part of the county do not show so well in the sanitary condition; other parts are very good in that respect. The sanitary condition of the jail is a credit not only to Mr. Rush, our jailor, but to the county also. That of the poor-house is good; the inmates are well fed and well cared for in every way.

Richmond—Dr. J. M. Covington, Rockingham. Influenza and rubeola, or rötheln have prevailed in many parts of the county. The sanitary condition of the county is good, also that of the public buildings.

Robeson—Dr. R. F. Lewis, Lumberton. La grippe has prevailed in all portions of the

county. The sanitary condition of the county is very good. Our court-house is being greatly improved. Our poor-house is a disgrace to any county in the State. Recommendations from the grand juries and repeated ones from the Superintendent of Health avail nothing.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. There has been little sickness. La grippe of a mild type has prevailed. The county seems to be quite free from serious diseases. Pneumonia following la grippe in old people has been very fatal. The public buildings are in good sanitary condition. There have been much needed repairs and improvements made on the court-house.

Rutherford—Dr. W. A. Thompson, Cliffdale. Measles and la grippe have prevailed in all parts of the county. The sanitary condition of the county is as good as usual, though not what it should be. I intend to try to wake up our people on sanitation this year. The jail is in good sanitary condition, and the poor-house as good as the building will admit of. In the insane department it is very bad. There is no way of warming the insane, and there is only a hole in the floor through which the excrement falls, thus making a very stinking mass.

Sampson—Dr. J. A. Stevens, Clinton. No report.

Stanly—Dr. D. P. Whitley, Plyler. La grippe and bronchitis, have prevailed in the southwestern part of the county. We have had more grippe this month than ever known before. I have heard of only one case of typhoid fever. The sanitary condition of the county is as good as usual. That of the poor-house is very good, while that of the jail is very bad, owing to arrangement of the building.

Stokes—Dr. W. V. McCausless, Danbury. La grippe has prevailed in all parts of the county. Several cases have proved fatal in old people. The sanitary condition of the county is very good; also that of the public buildings.

Surry—No Board of Health.

Swain—No Board of Health.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. No report.

Union—Dr. W. C. Ramsey, Monroe. La grippe has prevailed in all parts of the county, but in a mild form. No other sickness. The sanitary condition of the poor-house continues good, and that of the jail bad.

Vance—Dr. A. Cheatham, Henderson. Reports only that the condition of the public buildings is good.

Wake—Dr. James McKee, Raleigh. Influenza has prevailed in all parts of our city and county, constituting an epidemic. The sanitary condition of the county is good; no diseases prevailing that can be traced to bad drainage or apparent local cause. The sanitary condition of all the public buildings is very good and continually improving.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Council, Boone. No report.

Wayne—Dr. John Spicer, Goldsboro. Sanitary condition of the county is good; also that of the public buildings.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. La grippe has prevailed in all parts of the county. The sanitary condition of the county is good. Only one case of whooping-cough and one of typhoid fever reported. The sanitary condition of the public buildings is also good.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Ray, Burnsville. The sanitary condition of the county is better than usual. There have been no epidemics, and only one case of typhoid fever has been reported. The sanitary condition of the public buildings is moderately good.

Condition of Jails and Poor-houses by Counties for December, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	6 (a)				34			
Alexander.....	1	800	0	1	11	500	0	3
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....	2	800	1	1	8	1,000	2	2
Cabarrus.....								
Caldwell.....	3	*	0	3	8	*	3	2
Camden.....								
Carteret.....	0				0			
Caswell.....	4	500			22	1,000	9	3
Catawba.....	9		4	6	31		7	12
Chatham.....	2				30			
Cherokee.....	6	*			2	*		
Chowan.....								
Clay.....								
Cleveland.....	14	684		4	25	997		3
Columbus.....	6	*		5	13	*		0
Craven.....								
Cumberland.....	4				15			
Currituck.....								
Dare.....								
Davidson.....	4	*	0	0	23	720	0	3
Davie.....								
Duplin.....								
Durham.....	12	1,000		4	31 (b)	1,000		6
Edgecombe.....	16	*	4	3	24	*	3	5
Forsyth.....								

*Space exceeds one thousand cubic feet. (a) Includes 4 in house of correction. (b) Includes 16 in house of correction.

Condition of Jails and Poor-houses by Counties for December, 1891 (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	4				20			
Gaston.....								
Gates.....								
Graham.....								
Granville.....	2	*	0	0	28 (a)	*	13	9
Greene.....	1	500			10	1,000		1
Guilford.....								
Halifax.....								
Harnett.....								
Haywood.....								
Henderson.....	0				2			
Hertford.....								
Hyde.....								
Iredell.....								
Jackson.....								
Johnston.....	6	1,000	4	6	10	1,000	3	2
Jones.....								
Lenoir.....	5	*		2				
Lincoln.....	4	*			24	400		0
McDowell.....	4	550	2	1	10	400	1	1
Macon.....	3	*	2	2	0			
Madison.....								
Martin.....								
Mecklenburg.....								
Mitchell.....	3				5			
Montgomery.....	1				15			
Moore.....	2				8			
Nash.....								
New Hanover.....	20	600	10	12	21 (b)	1,000	17	12
Northampton.....								
Onslow.....	1	*	0	1	3	*	1	0
Orange.....	2	512	0	0	26	*	13	12
Pamlico.....								

* Space exceeds one thousand cubic feet. (a) Includes 5 in house of correction. (b) Includes 3 in house of correction.

Condition of Jails and Poor-houses by Counties for December, 1891 (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....								
Perquimans.....								
Person.....								
Pitt.....								
Polk.....								
Randolph.....	4	*	2	3	27	569	5	11
Richmond.....	0				6			0
Robeson.....	5	*			9	800		
Rockingham.....								
Rowan.....	10	750	2	2	19	*	2	1
Rutherford.....	4	*			24	800		
Sampson.....								
Stanly.....	0				16	800	0	1
Stokes.....	3	600	1	1	12	500	3	3
Surry.....								
Swain.....								
Transylvania.....								
Tyrrell.....								
Union.....	8	*		3	17	*		2
Vance.....	11	850			13	*		4
Wake.....	16	*			112 (a)			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	5	952			6	*		
Wilkes.....								
Wilson.....	2	*	0	1	21	*	7	6
Yadkin.....								
Yancey.....	2	*	0	1				

* Space exceeds one thousand cubic feet. a. Includes 49 in house of correction.

Meteorological Summary for North Carolina, December, 1891

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).								Mean Humidity.	Total Precipitation.	No. of Days				Prevailing Wind.	
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.			Mean Daily Range	Cloudless.	Partly Cloudy.	Cloudy.		Rainy.
Asheville.	43.9	64	23	55.9	15	1	32.0	49	23.9	61.8	2.25	15	8	8	7	N.
Concord.....	46.0	69	26	57.6	22	27	34.3	47	23.3	.....	2.30	11	5	9	5	S. W.
Charlotte.....	46.7	68	26	55.5	24	15	37.9	44	17.6	71.0	1.30	16	3	12	11	S.
Chapel Hill.....	46.8	74	25	60.2	19	18	33.4	55	26.8	.....	1.47	.....	.....	.....	6	.....
Douglas	41.5	70	24	55.7	13	1	27.3	57	28.4	.....	2.70	16	6	9	6	S. W.
Linville.....	35.6	60	16	47.3	3	29	23.9	57	23.4	.....	7.37	14	7	10	9	.....
Hendersonville.....	42.4	64	14	50.3	16	1	36.6	48	13.7	74.3	4.09	10	8	13	9	W.
Kitty Hawk.....	49.4	72	24	56.7	28	1	42.2	44	14.5	.....	1.03	16	7	8	12	S. W.
Littleton	47.4	71	26	60.3	21	28	34.4	50	25.9	.....	0.53	19	7	5	4	S. W.
Lexington.....	41.4	67	25	57.0	18	1	31.9	49	25.1	75.1	2.21	17	6	8	7	W.
Lenoir.....	41.9	65	24	59.9	17	1	34.5	48	16.4	.....	4.00	.....	.....	.....	8	.....
Morganton.....	43.3	67	24	56.1	18	1	34.2	49	21.9	73.1	3.93	.....	.....	.....	12	.....
Mount Airy.....	42.2	66	25	53.9	12	1	30.4	54	23.5	.....	4.88	13	8	10	10	S. W.
Oak Ridge.....	41.2	69	27	55.3	18	19	32.7	51	23.1	.....	2.96	14	4	13	11	S.
Pittsboro	44.8	69	15	51.5	15	1	35.0	54	19.5	.....	1.00	8	12	11	4	N.
Raleigh	47.8	72	26	57.5	19	1	38.1	53	19.4	75.8	1.24	14	7	10	8	S. W.
Southport	51.5	69	23	59.2	22	1	43.8	47	15.4	.....	1.15	12	11	8	8	N. E.
Southern Pines.....	47.6	73	27	61.6	15	1	33.6	58	28.0	.....	1.26	18	3	10	7	S.
Salisbury	48.5	66	24	55.0	26	19	39.9	40	15.1	.....	1.58	.....	.....	.....	7	.....
Louisburg.....	45.1	70	26	51.9	14	1	32.2	56	22.7	81.7	2.17	14	6	11	6	N. W.
Wadeville.	46.5	69	26	57.4	19	1	34.7	59	22.7	78.6	2.04	13	7	11	7	S. W.
Wilmington..	53.1	73	24	62.3	23	1	43.9	50	18.4	76.0	0.95	8	13	10	9	N. E.

STATE METEOROLOGICAL SUMMARY FOR DECEMBER, 1891.

Mean Barometer 30.27 inches; normal for December, 30.16 inches.

Highest Barometer 30.66 inches on the 31st at Lynchburg, Va.

Lowest Barometer 29.75 inches on the 16th, at Norfolk, Va.

Mean temperature 45.9 degrees; normal for 20 years, 43.6 degrees.

Highest temperature 76 on the 26th at Willetton.

Lowest temperature 3, on the 29th, at Linville.

Average rain-fall 2.38 inches; normal for December 4.19 inches.

Greatest monthly rain-fall 7.37 inches at Linville.

Least monthly rain-fall 0.53 inch at Littleton.

Average number of cloudless days 14; normal number 10.

Average number of partly cloudy days 7; normal number 11.

Average number of cloudy days 10; normal number 10.

Average number of rainy days 8; normal number 10.

Prevailing wind direction, south-west; average velocity 7 miles per hour.

Prevailing direction from many years' observations north-east; average hourly velocity 8 miles.

The month, on the whole, was very warm and pleasant. A thunder-storm occurred on the 29th. No snow, except trace, fell during the month.

NORTH CAROLINA BOARD OF HEALTH.

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FEBRUARY, 1892.

NO. II.

THE Mortuary Reports for the month of January represent twenty towns, being an increase of seven or eight over the usual number reporting. Still we are far from satisfied with the present condition of things, for there are some sixty towns in the State having a population of 1,000 or more. And especially do we want to see on the list regularly such towns as Charlotte, Salem, Newbern, Greenville, Randleman, Asheville, Reidsville, etc.

We have made repeated efforts to obtain reports from these towns by applications to the Mayors and also to the Superintendent of Health, where there was such an office, but have not even succeeded in drawing forth a reply. We will now appeal to the profession in the different towns to come to our assistance, and make an effort to have the town authorities pass an ordinance that will require a death certificate to be taken by the cemetery authorities before they may allow a body to be interred; also making it a violation of the town ordinances to bury a corpse till the death has been registered with the town clerk; also that it shall be a part of the duty of the town clerks to furnish to the Secretary of the State Board of Health on the 1st of each month a copy of all registrations during the preceding month.

It is high time North Carolina had started a system of vital statistics if she is ever to have

one, and if she is not, then give up the pretence of being a progressive State, for if we keep so woefully behind in a matter that is of *such prime importance* in this enlightened age, it will tend to neutralize the advance we make in other directions.

If the papers of the State would take up the matter and push it a little, we have no doubt there would soon be an improvement, for we have *faith in printers' ink* to do almost anything now-a-days. Come to our aid, Messrs. Editors, and stir up the people in this matter.

Summary of Mortuary Reports for January, '92.

(TWENTY TOWNS.)

	White.	Col'd.	Total.
Aggregate population.	54,700	46,870	101,570
Aggregate deaths.....	64	95	159
Representing annual			
death-rate per 1,000.	14.3	24.3	18.9
Deaths under 5 years old,			44
<i>Causes of death.</i>			
Malarial fever.....	1	1	2
Pneumonia.....	15	16	31
Consumption.....	3	6	9
Brain diseases.....	1	2	3
Heart diseases.....	7	4	11
Neurotic diseases.....	4	2	6
All other diseases.....	28	56	84
Accident.....	1	3	4
Still-born.....	4	5	9
	64	95	159

The Federal Meat Inspection Service--Some Anomalies and Shortcomings.

BY GEORGE HOMAN, M. D., MEMBER STATE BOARD OF HEALTH OF MISSOURI.

Some incidents which transpired at the meeting of the American Public Health Association last October, served to fix the attention of those present on several points of much importance to the people of this country, and which are worthy of the especial notice of all sanitary officials and physicians.

A paper was read by an inspector in the employ of the Department of Agriculture stationed at Kansas City, which related to the performance of the official duties with which he was charged. In the discussion which followed the reading of the paper, it was made known that the meat inspection service is conducted chiefly in the interest of the exporting packers and the foreign consumers of our meat products; that the protection of our own people against diseased meat is not the primary consideration at all.

Another interesting point developed was that the methods of this inspection are strictly secret, the subordinates being forbidden by the Washington authorities to divulge any information to any outsider on the subject.

This statement produced something of a sensation among those present, and pointed reference was made to the fact that as the people paid for this work, they were entitled to be informed concerning the manner in which it was conducted; and especially that such information should be forthcoming in the presence of a body so largely composed of those charged with the care of public health—nearly every State Board of Health in the country and many municipal boards being represented at the meeting—but the plea was made, of course, to no purpose.

It appears that this service is maintained chiefly for the inspection of the carcasses of hogs, with a view to prevent the exportation of products derived from any animal diseased with trichinosis. So far as the details of the gross inspection were learned, the dressed carcasses are made to pass rapidly before the inspector, who indicates any diseased or suspicious part

by inserting into it a small flag, and which part is rejected when the carcass is cut up.

Whether a portion of every animal slaughtered is subjected to microscopical test does not appear, but the rapidity of slaughter is such that this would be almost impossible, although it was stated that a staff of some twenty or more persons was employed for this purpose; the object being to certify, under authority of our national government, that the products of these establishments were free from disease, and thus enable them to pass the inspection and tariff prohibitions laid against American meats in Europe.

It would thus appear that this extensive service is maintained, not for the sanitary protection of the American people, not for the advantage of those who raise cattle, sheep and hogs for the market, but principally for the benefit of the packers—huge, corporate monopolies which, on the one hand, by far-reaching combinations, have forced down the prices of all kinds of butcher stock, and on the other hand have secured legislation whereby our government undertakes to provide them with markets abroad for their output at the public expense.

Another mischievous effect of this system is that the rejected meat is thrown on the domestic market, it being claimed that no Federal authority exists to seize and destroy it; and the consequence is that no doubt a considerable proportion escapes the inspection of State and municipal officials and reaches the market to be exposed and sold to our own people.

The effect of this action by the Federal government is to increase the amount of diseased meat handled by careless or unscrupulous dealers, and this includes the tuberculous flesh of cattle, with that of animals suffering with actinomycosis, trichina in hogs, anthrax in sheep, etc.

There is little room for doubt that the causes which led to the embargoes declared against American meat products during the last ten or more years on the continent of Europe were political and commercial in their nature; that the sanitary reasons alleged were mere pretenses, for there is no proof whatever that the live stock of this country is, or has ever been,

more subject to dangerous parasitical diseases than those of Europe. Indeed, the probability is that animal diseases are more rife abroad than here, and that human greed and selfishness, bending governmental powers to purposes directly opposed to the welfare of the many, have granted letters of marque or reprisal to individuals, and waged commercial warfare by means of retaliatory tariffs behind the mask of a pretentious concern for sanitary safety and public health.

This, however, seems to be the complexion always attained wherever man-made laws undertake to interfere with or control the operation of the natural laws of trade; if not avowedly framed in private interests they are perverted to such purposes, and either fail to achieve or directly defeat the public ends professedly or actually aimed at in their enactment.

That the practical effect of the working of the Federal meat inspection law, framed presumably to protect public health in this country, is to promote private interests at the public cost can hardly be gainsaid from what has been revealed concerning it, and that the sanitary welfare of the public is a matter secondary to the pecuniary profit of the corporations operating under it.

No explanations were offered or reasons given for the secrecy of methods observed in the inspection, and while the spirit of such a procedure is wholly un-American and merits condemnation on that ground alone, there is another reason for demanding publicity, and this is, that the people who bear the cost should have full opportunity to judge of its efficiency, and determine whether the governmental guarantee is well founded or not. As the matter now stands, there are no means afforded outsiders of knowing whether the inspectors really inspect; whether they satisfy the most advanced scientific requirements in the methods now in vogue.

There is a savor of something not only foreign to the best interests of our people, but of something that will not bear scrutiny in these developed facts. It is an anomalous thing that men who represent the local and State health interests of the people should be denied information concerning the work of public servants

on such an important subject as animal diseases and diseased meat products; and the maladministration or shortcomings of the service are palpable when it is found that the result of its operation is to confer favors on private interests as against those of the public, and, under a specious guise, to place the protection of public health secondary to the commercial advantage and prosperity of individuals and corporations.—*The Medical Fortnightly*.

Review of Diseases Reported for January, 1892.

Bronchitis—Reported from Burke, Iredell, Pitt, Richmond, Rowan and Sampson—6 counties.

Chicken-pox—From Davidson.

Diphtheria—From New Hanover, Stokes and Tyrrell.

Distemper—From Burke and Sampson.

Hog cholera—From Greene and Sampson.

Influenza, or La Grippe—From Alamance, Burke, Caldwell, Catawba, Chatham, Cherokee, Cleveland, Columbus, Cumberland, Duplin, Durham, Edgecombe, Franklin, Granville, Greene, Guilford, Haywood, Henderson, Iredell, Jackson, Lincoln, McDowell, Mitchell*, Nash, New Hanover, Onslow, Orange, Pender, Pitt, Randolph, Richmond, Robeson, Rowan, Sampson, Stanly, Swain, Tyrrell, Wake, Wayne, Wilson and Yancey—41 counties.

Malarial Fever—From Guilford.

Measles—From Caldwell, Chatham, Duplin, Guilford, Iredell, Mitchell, Nash, New Hanover, Onslow, Pitt, Randolph, Robeson, Stanly, Stokes, Wayne and Wilson—16 counties.

Mumps—From Alexander and Columbus.

Pneumonia—From Alexander, Burke, Caldwell, Chatham, Duplin, Edgecombe, Granville, Greene, Guilford, Haywood, Iredell, Lincoln, Orange, Pender, Richmond, Robeson, Rowan, Sampson, Stanly and Wilson—20 counties.

Tonsillitis—From Sampson.

Typhoid Fever—From Caldwell, Catawba, Nash, New Hanover, Randolph, Stokes and Tyrrell—7 counties.

Varicella—From Sampson.

Whooping-cough—From Alexander, Cald.

well, Davidson, Greene, Haywood, New Hanover, Randolph, Sampson, Wake, Wayne and Wilson—11 counties.

*—Reports *Influenza*, but no *La Grippe* as yet seen.

Summary of Reports from County Superintendents for January, 1892.

Alamance—Dr. G. W. Long, Graham. Influenza is abating. There have been several deaths among the aged. The public buildings are in the same condition as usual.

Alexander—Dr. J. B. Watts, Taylorsville. Whooping-cough, mumps, la grippe, complicated with pneumonia, are prevailing in all parts of the county. The sanitary condition of the county is not so good at present, owing to the unusual amount of rain-fall during the present month. The public buildings continue about the same, with the exception of some improvements in the water supply at the poor-house.

Alleghany—No board of health.

Anson—Dr. E. F. Ashe, Wadesboro. No report.

Ashe—No Board of Health.

Beaufort—Dr. S. T. Nicholson, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—No Board of Health.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. La grippe, bronchitis and pneumonia have prevailed in nearly all sections of the county. There has been distemper among horses in some sections. The sanitary condition of the county is good. The sanitary condition of the public buildings is about the same as at the last report.

Cabarrus—No Board of Health.

Caldwell—Dr. A. A. Kent, Lenoir. Grippe has prevailed in all parts of the county; and there have been reported four cases of measles, twenty of whooping-cough and three of typhoid fever. I have to report an unusually large amount of sickness for the month. Grippe, pneu-

monia, whooping-cough and measles have prevailed, with other sickness incident to variable weather. The sanitary condition of the public buildings is not changed.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. No report.

Caswell—Dr. R. H. Williamson, Yanceyville. There has been little or no sickness heard from; the physicians did not make reports for the last month. The sanitary condition of the county is very good; also that of the public buildings.

Catawba—Dr. G. H. West, Newton. There have been reported three cases of typhoid fever. La grippe has prevailed throughout the county. The sanitary condition of the county, as far as I can learn, is good. There are some improvements going on at the jail in regard to a plan of sewerage; will report more in detail when completed.

Chatham—Dr. H. T. Chapin, Pittsboro. During the past month la grippe has prevailed extensively in this county. It has been quite fatal with old people, of whom seven have died at the county "Home." The disease seems now to be on the decline. A few cases of pneumonia following la grippe have been reported, and we have had some measles. The public buildings are in good sanitary condition.

Cherokee—Dr. J. F. Abernathy, Murphy. The health of the county is not good—worse than any month this or last season. La grippe and its numerous complications have been prevailing. The sanitary condition of the public buildings is good. Have a good jailer and hospital steward.

Chowan—No Board of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. La grippe and pneumonia have prevailed in all portions of the county. The sanitary condition of the county is good; also that of the public buildings.

Columbus—Dr. Isaac Jackson, Whiteville. Mumps has prevailed in this part of the county, and la grippe of an aggravated form has prevailed in some portions. The sanitary condition of the county is good taken as a whole.

There have been a few mild cases of influenza in the village, but no deaths so far. The sanitary condition of the public buildings is very good.

Craven—Dr. L. Duffy, Newbern. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. La grippe has prevailed generally. The sanitary condition of the county is good; also that of the public buildings.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. Whooping-cough and chicken-pox have prevailed. The sanitary condition of the public buildings is unchanged since the last report.

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. There has been through January a very large amount of la grippe throughout the county in more severe form than ever before. It is often complicated with pneumonia. Measles also prevailed in some sections. The sanitary condition of the public buildings is good.

Durham—Dr. N. M. Johnson, Durham. There has been no other epidemic than la grippe prevailing in the county during the past month. The health of the county seems to be very good now. The public buildings are in good sanitary condition.

Edgecombe—Dr. Donald Williams, Tarboro. Influenza has prevailed in all sections of the county. There have been a good many cases of pneumonia following la grippe. The sanitary condition of the jail and poor-house is very good.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. Influenza and pneumonia have prevailed in some sections. Besides these there has been no sickness reported. The sanitary condition of the public buildings is very good.

Gaston—Dr. J. H. Jenkins, Dallas. No report.

Gates—No Board of Health.

Graham—No Board of Health.

Granville—Dr. Patrick Booth, Oxford. There have been a few cases of whooping-

cough, while la grippe and pneumonia have prevailed in all sections of the county. There have also been a few cases of hog cholera reported. The sanitary condition of the county is good; but some places need ditching, and efforts are being made in that direction. The sanitary condition of the public buildings is good, but could be improved by giving the inmates of the poor-house more light and wood floors instead of brick.

Greene—Dr. E. H. Sugg, Snow Hill. La grippe has prevailed in the county, and there have been several cases of pneumonia reported. Sanitary condition of the county and public buildings is good.

Guilford—Dr. E. R. Michaux, Greensboro. The health of the county for this month has been an improvement over last; however there has been some sickness, such as pneumonia, measles and malaria, to a certain extent. The pneumonia has been more fatal, perhaps, during the last month than is usually the case. Most of these have had la grippe in the outset. The sanitary condition of the public buildings is very good, excepting the jail. However, that is in as good condition as the majority of jails. Our poor-house is remarkably well kept; the inmates seem quite cheerful.

Halifax—Dr. A. B. Pierce, Weldon. No report.

Harnett—No Board of Health.

Haywood—Dr. J. H. Way, Waynesville. There have been a few cases of whooping-cough, and a mild type of influenza has prevailed in all parts of the county. There were a few deaths from pneumonia as a complication of la grippe in old people—very mild in the young and middle-aged. The sanitary condition of the jail is not good; that of the poor-house, good. The poor-house is on the cottage plan.

Henderson—Dr. J. L. Egerton, Hendersonville. Influenza has prevailed in all sections. The sanitary condition of the public buildings is good.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. There have been a goodly number of cases of la grippe,

bronchitis, pneumonia and fever; measles also reported. There is nothing being done to improve the sanitary condition of the public buildings, and it is not what it should be, but about as good as could be expected under the circumstances.

Jackson—Dr. J. M. Candler, Dillsboro. La grippe has prevailed in the county, with perhaps as many as twenty deaths during the month, and it is still raging. The sanitary condition of the public buildings is good.

Johnston—Dr. L. L. Sasser, Smithfield. No report.

Jones—No Board of Health.

Lenoir—Dr. C. B. Woodley, Kinston. No report.

Lincoln—Dr. W. L. Crouse, Lincolnton. La grippe and pneumonia have prevailed in all sections of the county. Other than this there is but little sickness in the county. The sanitary condition of the public buildings is good.

Macon—Dr. J. M. Lyle, Franklin. The sanitary condition of the county is very good. No sickness of any kind in the county for the past month. The sanitary condition of the public buildings is good.

Madison—No Board of Health.

Martin—Dr. W. H. Harrell, Williamston. No report.

McDowell—Dr. J. H. Gilkey, Marion. Influenza and catarrhal affections have prevailed in many portions of the county. We have had a great many cases of the prevailing epidemic and many deaths from it, but have had but little other sickness. The sanitary condition of the jail is good, but that of the Home is not good, owing to the crowded condition of the inmates.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. An epidemic of measles has prevailed in our town. The sanitary condition of the county is very good. No deaths yet from measles, though several adults have been attacked. There have been reported quite a number of cases of influenza, but no la grippe as yet that I have seen or heard of. The sanitary condition of the public buildings is very good.

Montgomery—Dr. F. E. Asbury, Asbury. No report.

Moore—Dr. Gilbert McLeod, Carthage. No report.

Nash—Dr. J. C. Mann, Nashville. La grippe has prevailed in all parts of the county, and there have been reported about fifty cases of measles and eight of typhoid fever. The sanitary condition of the county is good; also that of the public buildings.

New Hanover—Dr. F. W. Potter, Wilmington. La grippe has prevailed in all portions of the county. There have been reported five cases of measles, forty-seven of whooping-cough, one of diphtheria and two of typhoid fever. La grippe is now subsiding. The public buildings are in fair sanitary condition.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. E. L. Cox, Jacksonville. La grippe has prevailed in all parts of the county, and there have been about twenty-five cases of measles reported. The sanitary condition of the county is pretty good. I have treated between 200 and 300 patients with la grippe, and the mortality has been less than 1 per cent.

Orange—Dr. D. C. Parris, Hillsboro. Influenza has prevailed in all sections of the county. The sanitary condition of the county in a hygienic point of view is good; as regards health it is bad. Influenza and pneumonia have prevailed rather severely. The sanitary condition of the jail is not so good; that of the Home is moderately good. Efforts are being made to improve both places.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Bargaw. Influenza prevailed in all parts of the county, constituting an epidemic. In some cases it has been complicated with pneumonia, and such cases have been grave and protracted. Our people have sometimes mistaken moderate bad colds for la grippe and have suffered unnecessary anxiety. Experience teaches me that just in proportion as symptoms and not names are treated is success attained. The more la grippe that has prevailed the less typhoid fever have we had. Most of the sickness in the county

has been pulmonary in character. Our poor-house is well cared for, and the inmates well fed and well cared for.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. La grippe and measles have prevailed in nearly all portions of the county, with bronchitis as a sequel to la grippe and measles. The sanitary condition of the county is very good; also that of the public buildings.

Polk—No Board of Health.

Randolph—Dr. J. M. Boyette, Asheboro. La grippe has prevailed in all portions of the county. There have been three cases of measles, two of whooping-cough and one of typhoid fever reported. All reports are to the effect that the sanitary condition of the county is good. That of the jail and poor-house is also good.

Richmond—Dr. J. E. Covington, Rockingham. Influenza has prevailed in all parts of the county, a small per cent. being complicated with bronchitis and pneumonia. The sanitary condition of the county and public buildings is good.

Robeson—Dr. R. F. Lewis, Lumberton. The sanitary condition of the county and the public buildings, with the exception of the poor-house, is good. No epidemic diseases but measles and la grippe. The latter prevails in every section of the county, and some deaths have resulted from it. It is more severe than formerly and several cases of pneumonia have followed.

Rockingham—No Board of Health.

Rowan—Dr. J. J. Summerell, Salisbury. La grippe has prevailed in different parts in mild form. The sanitary condition of the county seems to have been good. Bronchitis and pneumonia and general catarrhal diseases have been reported, but not to the usual extent for the season. Little mortality among the colored people in Salisbury. The sanitary condition of the public buildings is good.

Rutherford—Dr. W. Thompson, Cliffdale. No report.

Sampson—Dr. J. A. Stevens, Clinton. The sanitary condition of the county is good. Influenza very prevalent. Many cases of pneu-

monia, bronchitis and tonsillitis, with a few cases of varicella and whooping-cough. There have been reported cholera among hogs and distemper among horses. The sanitary condition of the poor-house is very good. The jail has at last been condemned by the grand jury of the county and a new jail asked for. The jail we have is a disgrace to our county.

Stanly—Dr. D. P. Whitley, Plyler. There have been a great many cases of measles; also an abundance of la grippe. Have heard of a few deaths from it. Have had several cases of pneumonia but no deaths. The epidemic of measles seems to be confined to this locality. The poor-house is in good condition. The jail is not arranged in a manner conducive to the health of either inmates or jailer.

Stokes—Dr. J. W. Neal, Meadows. The sanitary condition of the county is good. There have been reported eighty-six cases of measles, seven of diphtheria and ten of typhoid fever. The sanitary condition of the public buildings is about as good as could be expected, owing to faulty construction.

Surry—No Board of Health.

Swain—Dr. R. L. Davis, Bryson City. The sanitary condition of the county is better than for several years. Only a few cases of la grippe in a mild form to report. The sanitary condition of the public buildings is not good, and no steps are taken to make it so.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. There have been reported one case of diphtheria and three of typhoid fever. Besides this, la grippe has prevailed in all parts of the county. The sanitary condition of the county is good. At least one-half of the people of the county were sick with la grippe during the months of December and January. The epidemic was very severe.

Union—Dr. W. C. Ramsay, Monroe. No report.

Vance—Dr. A. Cheatham, Henderson. No report on the prevailing diseases. Sanitary condition of the public buildings reported good, and that of the county much improved.

Wake—Dr. James McKee, Raleigh. There have been reported six cases of whooping-

cough. The epidemic of influenza is notably abating and has not left its mark on our people. The only effect was to slightly increase our mortality. Apart from the epidemic of la grippe the people were not disturbed by disease of any kind. The sanitary condition of public buildings is good and efforts are constantly made to improve it.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. No report.

Wayne—Dr. John Spicer, Goldsboro. There have been reported several cases of measles and whooping-cough, and many of la grippe.

The sanitary condition of the county is good; also that of public buildings.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. La grippe and pneumonia have prevailed all over the county; there have also been reported several cases of measles and one of whooping-cough. The sanitary condition of the county is good; as is also that of the public buildings.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Ray, Burnsville. Influenza has just begun in some portions of the county. The sanitary condition of the county is good now; that of the poor-house is moderately good; the jail is not kept as clean as it should be.

Condition of Jails and Poor-houses by Counties for January, 1891.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	7 (a)				34			
Alexander.....	2	500	0	2	11	200	0	3
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....	3	600			8		2	1
Cabarrus.....								
Caldwell.....	4	*	0	4	8	*	2	2
Camden.....								
Carteret.....								
Caswell.....	6	500		0	21	1,000	9	3
Catawba.....	4		2	4	27		6	8
Chatham.....	4				23			
Cherokee.....	5				2			
Chowan.....								
Clay.....								
Cleveland.....	17			5	24	997		4
Columbus.....	6	*		2	13	*		0
Craven.....								
Cumberland.....	3				15			
Currituck.....								
Dare.....								
Davidson.....	5	*	0	2	22	722	0	2
Davie.....								
Duplin.....	1				16	1,000		
Durham.....	3	1,000		2	28 (b)	1,000		5
Edgecombe.....	10	*	4	1	24	*	5	4
Forsyth.....								

*Space exceeds one thousand cubic feet. (a) Includes 2 in house of correction. (b) Includes 16 in house of correction.

Condition of Jails and Poor-houses by Counties for January, 1891 (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each (In cubic feet.)	Number giving evidence of successful vaccination.	Number * who can read and write.	Number inmates in.	Space allotted each (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	6				20			
Gaston.....								
Gates.....								
Graham.....								
Granville.....	6	*	3	2	32 (a)	*	14	15
Greene.....	2	500			2	1,000		1
Gulfford.....	22	521			33	*		
Halifax.....								
Harnett.....								
Haywood.....	7		0	4				
Henderson.....	4				2			
Hertford.....								
Hyde.....								
Iredell.....	14	801			25	443		
Jackson.....	4	200	2		4	200		
Johnston.....								
Jones.....								
Lenoir.....								
Lincoln.....	5	*		5	23	400		0
McDowell.....	4	550	1	1	9	600	1	1
Macon.....	0				0			
Madison.....								
Martin.....								
Mecklenburg.....								
Mitchell.....	3				6			
Montgomery.....								
Moore.....								
Nash.....	5	10 (b)	0	4	26	20 (b)	3	6
New Hanover.....	18	600	10	8	18 (b)	1,000	13	10
Northampton.....								
Onslow.....	3	*	0		3	*	1	0
Orange.....	2	512	0	0	27	*	10	11
Pamlico.....								

* Space exceeds one thousand cubic feet. (a) Includes 5 in house of correction. (b) Includes 4 in house of correction.

Condition of Jails and Poor-houses by Counties for January, 1891 (CONTINUED.)

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....								
Perquimans								
Person.....								
Pitt	4			3	20			1
Polk								
Randolph.....	3				31			
Richmond.....	1				6			
Robeson.....	7	987			10	720		
Rockingham.....								
Rowan.....	11	630	0	2	19	*	0	1
Rutherford.....								
Sampson.....	2				23			
Stanly.....	2	*	0	2	13	*	0	2
Stokes.....					13	500	2	3
Surry								
Swain.....	0				0			
Transylvania								
Tyrrell.....	1	*	0	1	0	*	0	0
Union.....								
Vance.....	11	935			16	*		
Wake.....	8	*			120 (a)			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	3	952	0	1	3	*	0	0
Wilkes,								
Wilson	4	*	0	2	25	*	7	6
Yadkin.....								
Yancey	4	576	1	2	2	*		

* Space exceeds one thousand cubic feet. a. Includes 54 in house of correction.

Mortuary Report for January, 1892.

TOWNS AND REPORTERS.	Races.	Population.		Representing Annual death Rate per 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All other Diseases.	Accid'ts & Violence.	Suicide.	Still-Born.	Total															
		By Races.	Total.	By Races.	Tot.																	By Races.	Tot.	By Races.	Tot.	By Races.	Tot.	By Races.	Tot.	By Races.	Tot.	By Races.	Tot.	By Races.	Tot.	By Races.	Tot.
Washington City Clerk.....	White Color'd	(?) (?)	4,500	.....	21.3	.....	.....	1	.....	.....	.....	3 2	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 3	8
Lexington The Mayor.....	White Color'd	(?) (?)	1,650	.....	7.3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1 0	1
Durham Dr. N. M. Johnson.....	White Color'd	4,500 3,000	7,500	2.7 8.0	4.8	.....	.....	.....	.....	.....	.....	1 1	.....	.....	.....	.....	.....	1	.....	.....	.....	1 2	3
Fayetteville Dr. J. H. Marsh.....	White Color'd	2,800 2,200	5,000	12.8 49.1	28.8	.....	.....	.....	.....	.....	.....	1 1	1	1	.....	.....	2 6	.....	.....	.....	.....	3 9	12		
Goldsboro The Mayor.....	White Color'd	2,800 2,200	5,000	30.0 32.5	31.2	.....	.....	.....	.....	.....	.....	1 3	.....	.....	2	.....	4 3	.....	.....	.....	.....	7 6	13	
Henderson Dr. A. Cheatham.....	White Color'd	2,256 2,000	4,256	0.0 18.0	8.5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....	.....	.....	0 3	3
Weldon The Mayor.....	White Color'd	(?) (?)	1,500	.....	16.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1 1	2
Oxford Dr. Patrick Booth.....	White Color'd	1,700 1,600	3,300	0.0 0.0	0.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0 0	0
Raleigh Dr. Jas. McKee.....	White Color'd	8,000 7,000	15,000	16.5 17.1	16.8	.....	.....	.....	.....	.....	.....	1 2	1 2	2	.....	.....	6 4	.....	.....	.....	.....	1 10	21		
Salisbury Dr. M. W. Hill.....	White Color'd	2,850 1,650	4,500	8.4 10.8	42.0	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	1 14	16
Tarboro Dr. D. Williams.....	White Color'd	1,258 1,112	2,370	19.1 0.0	10.1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	2 0	2
Winston City Physician.....	White Color'd	4,900 5,100	10,000	9.8 32.9	21.6	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	3 13	.....	.....	.....	.....	4 14	18	
Wilmington Dr. F. W. Potter.....	White Color'd	9,000 12,000	21,000	22.7 26.0	24.6	.....	.....	1	.....	.....	.....	4 3	1 2	3 2	1	.....	8 12	.....	.....	.....	.....	17 26	43				
Greensboro Dr. E. R. Michaux.....	White Color'd	4,000 2,000	6,000	9.0 18.0	12.0	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1 2	1	.....	.....	.....	1 3	6	
Statesville Dr. M. W. Hill.....	White Color'd	2,000 500	2,500	6.0 0.0	4.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1 0	1
Wilson Dr. A. Anderson.....	White Color'd	2,000 1,500	3,500	18.0 0.0	10.3	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1 3	0
Hillsboro Dr. D. C. Parris.....	White Color'd	600 400	1,000	0.0 60.0	24.0	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	0 2	2
Rocky Mount City Clerk.....	White Color'd	(?) (?)	1,000	.....	35.0	.....	.....	.....	.....	.....	.....	1 1	.....	.....	.....	.....	.....	1	.....	.....	.....	2 1	3
Scotland Neck The Mayor.....	White Color'd	600 400	1,000	.....	24.0	.....	.....	.....	.....	.....	.....	1 1	1	.....	.....	.....	.....	.....	.....	.....	.....	0 2	2
Southport The Mayor.....	White Color'd	(?) (?)	1,000	.....	12.0	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1 0	1

Meteorological Summary for North Carolina, January, 1892.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).									No. OF DAYS						
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range	Mean Humidity.	Total Precipitation.	Cloudless.	Partly Cloudy.	Cloudy.	Rainy.	Prevailing Wind.
Asheville.....	34.2	60	29	44.3	8	7	25.0	52	19.3	67.2	6.52	11	7	13	15	S. & E.
Coneord.....	38.2	68	25	47.4	16	26	29.1	52	18.3	.....	11.50	16	6	9	11	N.W.
Charlotte.....	38.0	61	13	45.9	18	27	30.2	46	15.7	.....	7.66	12	6	13	12	N. E.
Chapel Hill	35.9	68	1	46.8	14	26	25.0	54	21.8	.....	6.22	.....	.....	.....	11	.....
Douglas	36.5	63	14	49.7	9	18	23.2	54	26.5	.....	9.80	12	8	11	11	N. E.
Linville.....	32.4	57	31	43.7	4	8	21.0	53	22.7	.....	1.89	21	7	3	6	.....
Hendersonville.....	34.1	58	25	41.3	12	8	29.4	46	11.9	67.4	6.72	10	9	12	5	N.W.
Kitty Hawk.....	42.4	70	13	48.5	19	27	36.3	51	12.2	.....	2.63	8	8	15	14	N.W.
Littleton	39.3	69	15	50.9	15	17	27.7	54	23.2	.....	2.92	.....	.....	.....	8	W.
Lexington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lenoir.....	36.2	62	25	42.0	14	8	30.4	48	11.6	.....	5.30	.....	.....	.....	10	.....
Morganton.....	36.5	67	25	44.5	12	8	28.5	55	16.0	.....	6.71	.....	.....	.....	9	.....
Mount Airy.....	34.8	64	25	43.8	10	8	25.8	54	18.0	.....	5.09	16	3	12	10	N.W.
Oak Rldge.....	36.6	65	25	46.6	13	27	26.5	52	20.1	.....	6.07	9	7	15	12	N.W.
Pittsboro	35.4	62	14	43.8	15	4	26.9	47	16.9	.....	5.55	12	3	16	8	N. E.
Raleigh	38.6	68	25	46.9	16	27	30.3	52	16.6	73.6	6.87	9	8	14	12	N.
Southport	44.1	64	13	51.4	22	4	36.8	42	14.6	.....	6.44	12	8	11	12	N.
Southern Pines.....	39.6	68	2	52.7	13	4	26.6	55	26.1	.....	7.01	15	4	12	11	S. W.
Salisbury	38.4	63	25	45.0	19	27	31.1	44	13.9	.....	3.63	.....	.....	.....	12	.....
Louisburg.. ..	35.6	62	25	44.5	11	3	26.7	51	17.8	.....	6.22	8	6	17	8	N.W.
Weldon	39.2	66	25	49.1	18	27	29.3	48	19.8	.....	6.15	.....	.....	.....	12	N.W.
Wilmington.. ..	45.9	71	13	53.1	23	4	36.6	48	16.5	.....	4.91	9	7	15	12	N.W.

STATE METEOROLOGICAL SUMMARY FOR JANUARY, 1892.

Mean Barometer 30.13 inches; normal for January, 30.17 inches.

Highest Barometer 30.66 inches, on the 17th, at Lynchburg, Va.

Lowest Barometer 29.26 inches, on the 6th, at Norfolk, Va.

Mean temperature 38.1 degrees; normal for January, 41.5 degrees.

Highest temperature 72, on the 13th, at Norfolk, Virginia.

Lowest temperature 4, on the 8th, at Linville.

Average rain-fall, 5.96 inches; normal for January, 4.64 inches.

Greatest monthly rain-fall, 11.50 inches, at Concord.

Least monthly rain-fall, 1.89 inch, at Linville.

Average number of cloudless days, 11.

Average number of partly cloudy days, 7.

Average number of cloudy days, 13.

Average number of rainy days, 11.

Prevailing wind direction, north-west; average velocity, 10 miles per hour. Prevailing direction from many years' observations, south-west. Average velocity, 8.5 miles per hour.

BULLETIN

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NO. 12.

Dust and Dusting.

"It is our littleness that sees no greatness in a trifle." This is true if success is a multiple of careful details. It is true, therefore, of perfection in every art and work, even the commonest, and among such a contemporary has assigned a place to the seemingly menial art of dusting; for, as he says truly enough, there is an art in dusting, and it is one which on every ground deserves far more studious cultivation than it usually receives. Different observers have from time to time described the components of ordinary dust, and these it is needless to say, exhibit special characters in almost endless variety. Mineral matters, animal and vegetable debris, morbid germs, whatever in fact is light enough and small enough to remain for a time suspended in air, come under this common and generic but far from harmless term. The spread of cholera and exanthematous diseases has, no doubt, with perfect truth been attributed to its influence. It is clear, then, that the method to be employed for its removal is a matter of some importance. As regards this, we need hardly discuss every suggestion of housewifery. Some would pin their

faith, not without reason, to the damp duster rather than the dry one, but this will not suffice in itself, and, moreover, every kind of furniture does not bear such treatment. Where possible, it is of the two the more effectual plan. Above all, however, it is needful to remember that the object aimed at is not displacement of dust only, but its removal, and for this purpose a combination of thorough daily ventilation by open doors and windows with careful sweeping, followed by at least displacement of any dust still remaining with a cloth, is the only method alike feasible and effective. All over-crowding with furniture or with woven fabrics is to be avoided. Bed curtains and vallances are no less objectionable, and bare floors are more wholesome than the choicest carpet. Nowhere is care in these particulars more justified or more imperative than in the crowded homes of the poor. Let us mention one other point, the healthy effect of sunlight. It is now admitted that some disease germs lose their power on exposure to light. In this fact we have a standing protest against the custom of darkening rooms with lowered blinds, or that aesthetic error which covers the window space with crossed curtains. —*Exchange.*

Summary of Mortuary Reports for February, '92.

(NINETEEN TOWNS.)

	White.	Col'd.	Total.
Aggregate population	51,400	45,600	97,000
Aggregate deaths	56	75	131
Representing an annual			
death-rate per 1,000,	13.0	17.5	16.2
Deaths under 5 years old,			36
<i>Causes of death.</i>			
Malarial fever	0	1	1
Whooping-cough	3	1	4
Pneumonia	14	16	30
Consumption	6	4	10
Brain diseases	1	0	1
Heart diseases	4	8	12
Neurotic diseases	1	4	5
Diarrhoeal diseases	0	3	3
All other diseases	19	29	48
Accident	2	3	5
Suicide	1	0	1
Still-born	5	6	11
	56	75	131

Review of Diseases for February, 1892.

Bronchitis—Was reported from Edgecombe, Johnston, Lincoln, Montgomery, McDowell, Nash and Pitt—7 counties.

Chicken-pox—From Burke and Caswell.

Diarrhoea—From Pitt.

Diphtheria.—From Montgomery and Randolph.

Distemper—From Nash.

Erysipelas—From Haywood.

Hog Cholera—From Caswell and Pender.

Influenza—From Alamance, Alexander, Burke, Caldwell, Carteret, Catawba, Chatham, Cherokee, Cleveland, Columbus, Duplin, Edgecombe, Greene (also in domestic animals in Greene), Haywood, Jackson, Johnston, Macon, McDowell, Mitchell, Montgomery, Nash, New Hanover, Orange, Pender, Pitt, Richmond, Robeson, Rowan, Rutherford, Stanly, Swain, Union, Wake, Wilson and Yancey—35 counties.

Malarial Fever (Pernicious)—From Tyrrell.

Measles—From Alamance, Carteret, Caswell, Duplin, Franklin, Greene, Haywood,

Johnston, Mitchell, Montgomery, Nash, New Hanover, Pitt, Randolph, Richmond, Robeson, Rowan, Rutherford, Stanly, Stokes, Wayne and Wilson—22 counties.

Mumps—From Alexander and Burke.

Pneumonia—From Alexander, Chatham, Cleveland, Edgecombe, Franklin, Granville, Greene, Jackson, Johnston, Martin, McDowell, Nash, Pender, Pitt, Robeson, Wayne and Wilson—17 counties.

Rheumatism—From Lincoln and Orange.

Tonsillitis—From Union.

Typhoid Fever—From Caldwell, Granville, New Hanover, Randolph and Stanly—5 counties.

Whooping-cough—From Alexander, Burke, Caldwell, Carteret, Haywood, Iredell, Montgomery, New Hanover, Randolph, Rowan, Rutherford and Stanly—12 counties.

Summary of Reports from County Superintendents for February, 1892.

Alamance—Dr. G. W. Long, Graham. *La Grippe* lingers in the county, and I have heard that measles exist. The sanitary condition of the public buildings is as usual. Two deaths have occurred at the Home.

Alexander—Dr. J. B. Watts, Taylorsville. Whooping-cough, mumps and *la grippe*, complicated with pneumonia, are very prevalent in all parts of the county. The sanitary condition of the county has been very good; also, that of the public buildings, but by no means perfect.

Alleghany—No Board of Health.

Anson—..... No report.

Ashe—No Board of Health.

Beaufort—Dr. S. T. Nicholson, Washington. No report.

Bertie—No Board of Health.

Bladen—Dr. N. Robinson, Elizabethtown. No report.

Brunswick—Dr. D. I. Watson, Southport. Some few cases of *la grippe*; whooping-cough prevalent—nearly all the children suffering from it. The weather for the month has been very disagreeable.

Buncombe—Dr. H. B. Weaver, Asheville. No report.

Burke—Dr. J. L. Laxton, Morganton. The sanitary condition of the county is good. *La grippe*, chicken-pox, mumps and whooping-cough have been reported. The sanitary condition of the public buildings is about as last reported.

Cabarrus—No Board of Health.

Caldwell—Dr. A. A. Kent, Lenoir. *La grippe* has prevailed, but is now abating. Catarrhal troubles have been common in all parts of the county. There have been reported also ten cases of whooping-cough and one of typhoid fever. The sanitary condition of the poor-house is good; that of the jail bad, but efforts are being made for better sewerage and ventilation.

Camden—No Board of Health.

Carteret—Dr. M. F. Arendell, Morehead City. The sanitary condition of the county is improving. *La grippe* has been quite bad among us, but we are getting better. Measles has prevailed, but is dying out.

Caswell—Dr. R. H. Williamson, Yanceyville. Chicken-pox and measles have prevailed. The sanitary condition of the county is very good. There has been an epidemic of hog-cholera. The sanitary condition of the public buildings is very good.

Catawba—Dr. G. H. West, Newton. *La grippe* has prevailed in all parts of the county. There have been reported twelve cases of whooping-cough. There will be improvements made at the poor-house this summer.

Chatham—Dr. H. T. Chapin, Pittsboro. During the past month there have been reported considerable colds and influenza, and a few cases of pneumonia. At present the sanitary condition of the county is good. The Home is in good condition, as also the jail.

Cherokee—Dr. J. F. Abernathy. The health of this county is indeed fair—no more *la grippe*. The sanitary condition of the public buildings is good.

Chowan—No Board of Health.

Clay—No Board of Health.

Cleveland—Dr. O. P. Gardner, Shelby. *La grippe* and pneumonia have prevailed in various

parts of the county. The sanitary condition of the county is good. The prisoners have been removed to the new jail. It is well ventilated and heated and provided with sewerage.

Columbus—Dr. I. Jackson, Whiteville. The sanitary condition of the county is good outside of the prevailing epidemic of influenza, which is of a mild type as compared with the disease in other sections. The sanitary condition of the public buildings is good.

Craven—Dr. L. Duffy, New Berne. No report.

Cumberland—Dr. J. H. Marsh, Fayetteville. The sanitary condition of the county is good; also that of the public buildings.

Currituck—No Board of Health.

Dare—No Board of Health.

Davidson—Dr. R. L. Payne, Jr., Lexington. No report.

Davie—No Board of Health.

Duplin—Dr. J. W. Blount, Kenansville. *La grippe* has been more than usually severe, but appears to be abating. We have an epidemic of measles, which is very prevalent in a large portion of the county. The sanitary condition of the public buildings is good.

Durham—Dr. N. M. Johnson, Durham. The sanitary condition of the county has been good. There have no epidemics prevailed. The sanitary condition of the public buildings is also good.

Edgecombe—Dr. Donald Williams, Tarboro. *La grippe* has prevailed in all parts of the county, with pneumonia and bronchitis. The jail and poor-house are well kept.

Forsyth—Dr. D. N. Dalton, Winston. No report.

Franklin—Dr. E. S. Foster, Louisburg. Measles prevails in nearly all portions. With this exception, there has been very little sickness. I have heard of a few cases of pneumonia of a mild type. The sanitary condition of the public buildings is good.

Gaston—Dr. J. H. Jenkins, Dallas. No report.

Graham—No report.

Granville—Dr. Patrick Booth, Oxford. There have been reported seven cases of typhoid fever. The sanitary condition of the

county is reported favorable. Some cases of membranous sore throat reported, lasting from five to eight days, but there have been no fatal cases. Some pneumonia was also reported. The sanitary condition of the public buildings is fair; jail needs better heating, cleaning and white-washing; poor-house needs new floors in most of the rooms, and more light.

Greene—Dr. E. H. Sugg, Snow Hill. *La grippe* has prevailed in the county, with several cases of measles and pneumonia reported. There has also been an epidemic of *la grippe* among domestic animals. The sanitary condition of the county is, as usual, good. That of the public buildings also good.

Guilford—Dr. E. R. Michaux, Greensboro. No report.

Halifax—Dr. A. B. Pierce, Weldon. *La grippe* has prevailed in all portions of the county. With this exception, the health of the county has been good. It has assumed a different phase from last year. It is characterized by an affection of the mucous membrane of the lungs and alimentary canal, and sometimes followed by pneumonia, and more severe and more fatal. Jail is as last reported. Some improvement in buildings at the poor-house; there is more room,*and it is in a more comfortable condition.

Harnett—No Board of Health.

Haywood—Dr. J. H. Way, Waynesville. There have been reported a few cases of measles and quite a number of whooping-cough of moderate severity. Sporadic cases of erysipelas have been noted in different sections of the county. With the above exceptions, the health of the county has been very good. *La grippe* prevailed in the early part of the month, but had about subsided by the middle. As stated in the last report, the jail, at best, is in bad condition, and until a new one is built will be unremediable. The keeper, I suppose, does as well as he can in keeping it decent, but is not successful. Our jail is simply a disgrace to a civilized people. We hope to have a new one after the next Legislature.

Henderson—Dr. J. L. Egerton, Hendersonville. The sanitary condition of the county is good.

Hertford—No Board of Health.

Hyde—No Board of Health.

Iredell—Dr. M. W. Hill, Statesville. Whooping-cough has been reported. The sanitary condition of the county is quite good; at least, there has been very little sickness over the county. The sanitary condition of the public buildings is fairly good. A small improvement has been made at the jail, but there is still room for greater work in that line.

Jackson—Dr. J. M. Candler, Dillsboro. *La grippe* has prevailed in the county. With pneumonia, it has caused about twenty deaths during the month. The sanitary condition of the county is good; also that of the public buildings.

Johnston—Dr. L. L. Sasser, Smithfield. Bronchial troubles, pneumonia and *la grippe* have prevailed. There have also been reported five cases of measles. The sanitary condition of the county is good; also of public buildings.

Jones—No Board of Health.

Lenoir—Dr. C. B. Woodley, Kinston. No report.

Lincoln—Dr. J. M. Lawing, Lincolnton. Bronchial and rheumatic troubles have prevailed in nearly all portions. The sanitary condition of the county is fairly good; also that of the public buildings.

Macon—Dr. J. M. Lyle, Franklin. Except a few cases of *la grippe*, there has been no sickness in the county. The sanitary condition of the county is fairly good, and the result is manifest to the casual observer. For several years the general health of our county has improved so that there is now very little general sickness. The sanitary condition of the public buildings is good.

Madison—No Board of Health. *

Martin—Dr. W. H. Harrell, Williamston. Bronchitis and pneumonia have prevailed in all parts of the county. Catarrhal affections of the respiratory tract have prevailed all over the county. There have been some deaths from pneumonia. The health of the community has been improving, however, since the weather has become more settled. The sanitary condition of the public buildings is good.

McDowell—Dr. J. H. Gilkey, Marion.

Catarrhal affections have prevailed in many portions. We have had a great many cases of *la grippe*, complicated frequently with pneumonia and bronchitis, but not many fatal cases. The condition of the public buildings is not very good. The inmates of the Home are still too much crowded for their health and comfort.

Mecklenburg—No Board of Health.

Mitchell—Dr. C. E. Smith, Bakersville. *La grippe* has prevailed in all parts of the county. We have had a perfect epidemic of this disease, but few deaths as yet. The epidemic of measles is abating. Entire families, numbering as many as nine, have been confined to bed with *la grippe* at the same time. The sanitary condition of the public buildings is as good as usual. Some improvement is anticipated in the jail building soon.

Montgomery—Dr. F. E. Asbury, Asbury. The sanitary condition of the county is not very good. Influenza and measles have raged this winter—nearly everybody sick. Also, there have been reported some whooping-cough and diphtheria. The sanitary condition of the public buildings is about as last reported.

Moore—Dr. Gilbert McLeod, Carthage. No report.

Nash—Dr. J. J. Mann, Nashville. *La grippe*, measles, pneumonia and bronchitis have prevailed in all parts of the county. The sanitary condition of the county is extremely good. Distemper has been epidemic among dogs all over the county. The sanitary condition of the public buildings is good. We are having water-works put to our jail so prisoners can use it at will, and in case of fire. The building will be furnished one hundred gallons per day.

New Hanover—Dr. F. W. Potter, Wilmington. *La grippe* (now subsiding) has prevailed in nearly all portions of the county. There have been reported ten cases of measles, forty-five of whooping-coughing, and one of typhoid fever. As far as there can be ascertained, there is very little sickness in the county. I have heard of only one death during the month from the effects of *la grippe*. I have urged thorough drainage of the city, and more attention to clearing the streets and lots of garbage. The

public buildings are all in fair sanitary condition.

Northampton—Dr. H. W. Lewis, Jackson. No report.

Onslow—Dr. E. L. Cox, Jacksonville. No report.

Orange—Dr. D. C. Parris, Hillsboro. Influenza has prevailed in all sections of the county. Throat diseases and rheumatism in mild form have been moderately prevalent. The sanitary condition of the public buildings is good, except that of the jail. Some improvements have been made at the Home recently.

Pamlico—No Board of Health.

Pasquotank—No Board of Health.

Pender—Dr. S. S. Satchwell, Burgaw. Influenza has prevailed in the county, often running into pneumonia. There has been an epidemic of cholera among hogs. The sanitary condition of the public buildings is satisfactory, except that drainage continues to be neglected. Our citizens continue to disregard the importance of drainage, ventilation and drinking water.

Perquimans—No Board of Health.

Person—No Board of Health.

Pitt—Dr. B. T. Cox, Redalia. *La grippe* and measles have prevailed in nearly all portions of the county. There have been a few cases of pneumonia and bronchitis as a result of measles and grip. Three cases of diarrhœa reported.

Polk—No Board of Health.

Randolph—Dr. J. M. Boyette, Asheboro. The sanitary condition of the county seems to be tolerably good, as all the reports are favorable in that respect. There have been reported nine cases of measles, one of whooping-cough, two of diphtheria, and two of typhoid fever. The sanitary condition of the jail is excellent; that of the Home is much better than it has been for some time, but could be still more improved were more labor given the steward. I have heard of a few cases of meningitis unofficially—none reported.

Richmond—Dr. J. M. Covington, Rockingham. *La grippe* in mild form has prevailed in all parts of the county; measles, also, in some sections. The sanitary condition of the county

is not as good as it should be; that of the public buildings is fair only.

Robeson—Dr. R. F. Lewis, Lumberton. Influenza, accompanied by pneumonia, has prevailed in some parts of the county. Measles has also been reported. The sanitary condition of the county is good; that of the courthouse and jail is also good. The Home is in a very dilapidated condition, and very uncomfortable in cold weather. All the inmates are women, and most of them helpless. No efforts are being made by the county towards improvement.

Rowan—Dr. J. J. Summerell, Salisbury. The sanitary condition of the county is about as usual. It is no worse than it has been, and no efforts have been made to make it better. There have been some cases of measles and whooping-cough reported. Influenza still lingers, with bronchitis and pneumonia as sequels. The sanitary condition of the public buildings is good.

Rutherford—Dr. W. A. Thompson, Cliffdale. Measles, whooping-cough and influenza have prevailed. The sanitary condition of the county is unchanged.

Sampson—Dr. J. A. Stevens, Clinton. No report.

Stanly—Dr. D. P. Whitley, Plyler. Measles and whooping-cough have prevailed, and there have been reported two cases of typhoid fever. The sanitary condition of the county is good. *La grippe*, with its complications, has been prevalent, but is on the decline. The sanitary condition of the public buildings is the same as last month.

Stokes—Dr. J. W. Neal, Meadows. The sanitary condition of the county is good. There have been reported sixteen cases of measles. The sanitary condition of the public buildings is as good as could be expected with their faulty construction.

Surry—No Board of Health.

Swain—Dr. R. L. Davis, Bryson City. The sanitary condition of the county is better than for several years. No sickness, except a few cases of *la grippe* in a mild form. The sanitary condi-

tion of the public buildings is not very good. Steps are being taken to improve them.

Transylvania—No Board of Health.

Tyrrell—Dr. Ab. Alexander, Columbia. The sanitary condition of the county is good. One case of pernicious malarial fever has occurred.

Union—Dr. W. C. Ramsay, Monroe. *La grippe*, tonsillitis and catarrh of the lungs have prevailed in most parts of the county. The condition of the jail is bad; that of the poor-house is good.

Vance—Dr. A. Cheatham, Henderson. The sanitary condition of the public buildings is good. The water served the inmates of the poor-house is not good, but efforts are being made to improve it.

Wake—Dr. James McKee, Raleigh. The sanitary condition of the county is very good; lands are being cultivated and thoroughly drained. Our people are improving their homes, and are not losing sight of sanitation in so doing. No epidemic of any kind has prevailed in the county. Influenza has almost entirely subsided. The sanitary condition of all our public buildings is good.

Warren—Dr. P. J. Macon, Warrenton. No report.

Washington—No Board of Health.

Watauga—Dr. W. B. Councill, Boone. No report.

Wayne—Dr. John Spicer, Goldsboro. Measles has been epidemic. The sanitary condition of the county is good. There is some pneumonia and some fever. The sanitary condition of the public buildings is good.

Wilkes—No Board of Health.

Wilson—Dr. Albert Anderson, Wilson. *La grippe*, pneumonia and measles have prevailed in all parts of our county. The sanitary condition of the county is fair. The sanitary condition of the public buildings is good.

Yadkin—Dr. T. R. Harding, Yadkinville. No report.

Yancey—Dr. J. L. Ray, Burnsville. *La grippe* has prevailed in many portions of the county. The general health of the county is very good. The jail is not kept very clean, but the poor-house is very well kept.

Condition of Jails and Poor-houses by Counties for February, 1892.

COUNTIES.	JAIL.				POOR-HOUSE AND HOUSE OF CORRECTION.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance.....	7 (a)				34			
Alexander.....	5	300	0	5	11	500	0	3
Alleghany.....								
Anson.....								
Ashe.....								
Beaufort.....								
Bertie.....								
Bladen.....								
Brunswick.....								
Buncombe.....								
Burke.....	4	600	1	1	8	800	2	3
Cabarrus.....								
Caldwell.....	4	*	1	4	8	*	3	3
Camden.....								
Carteret.....	0				0			
Caswell.....	1	1,000			22	1,000		
Catawba.....	2		0	1	25		10	15
Chatham.....	1				22			
Cherokee.....	4				2			
Chowan.....								
Clay.....								
Cleveland.....	17			5	24	997		3
Columbus.....	5	*		2	13	*		0
Craven.....								
Cumberland.....	2				15			
Currituck.....								
Dare.....								
Davidson.....								
Davie.....								
Duplin.....	1				9			
Durham.....	10	1,000		4	30 (b)	1,000		5
Edgecombe.....	12	*	4	5	24	*	7	8
Forsyth.....								

*Space exceeds one thousand cubic feet. (a) Includes 2 in house of correction. (b) Includes 16 in house of correction.

Condition of Jails and Poor-houses by Counties for February, 1892.—Continued.

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	4				20			
Gaston.....								
Gates.....								
Graham.....								
Granville.....	6	*	2	1	34 (a)	*	15	9
Greene.....	1	500		1	10	1,000		1
Guilford.....								
Halifax.....								
Harnett.....								
Haywood.....	7		0	7				
Henderson.....	5				3			
Hertford.....								
Hyde.....								
Iredell.....	10	*			24	462		
Jackson.....	4	200			4	200		
Johnston.....	6	*	4	5	11	1,000	5	3
Jones.....								
Lenoir.....								
Lincoln.....	6	*		5	23	400		
McDowell.....	7	550	1	1	8	600	1	1
Macon.....	1	*	0	0				
Madison.....								
Martin.....	3	1,000		1	11	1,000	2	2
Mecklenburg.....								
Mitchell.....	3				5			
Montgomery.....	1				18			
Moore.....								
Nash.....	6	600		4	25	1,000	3	6
New Hanover.....	18	600	10	10	21 (b)	1,000	15	10
Northampton.....								
Onslow.....								
Orange.....	3	512	1	0	24	*	9	8
Pamlico.....								

* Space exceeds one thousand cubic feet. (a) Includes 10 in house of correction. (b) Includes 4 in house of correction.

Condition of Jails and Poor-houses by Counties for February, 1892.—Continued.

COUNTIES.	JAIL.				POOR-HOUSE.			
	Number prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	Number inmates in.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....								
Pender.....	1				4			
Perquimans.....								
Person.....								
Pitt.....					23			1
Polk.....								
Randolph.....	4			4	31			16
Richmond.....	9				5			
Robeson.....	6	*			11	655		
Rockingham.....								
Rowan.....	9	800	0	3	17	*	0	2
Rutherford.....	4	800			24	700		
Sampson.....								
Stanly.....	2	*	0	2	12	*	0	2
Stokes.....	2	600			14	500	2	3
Surry.....								
Swain.....								
Transylvania.....								
Tyrrell.....	1	*			1	*		
Union.....	2	*			15	*		1
Vance.....	11	850			16	*		
Wake.....	12	*			114 (a)			
Warren.....								
Washington.....								
Watauga.....								
Wayne.....	9	952		1	3	*		0
Wilkes.....								
Wilson.....	4	500	2	3	27	*	7	6
Yadkin.....								
Yancey.....	6	384	3	5	1			

* Space exceeds one thousand cubic feet. (a) Includes 50 in house of correction.

Mortuary Report for February, 1892.

TOWNS AND REPORTERS.	RACES.	POPULA- TION.		REPRE- SENTING ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrhoeal Diseases.	All Other Diseases.	Accident and Violence.	Suicide.	Still-born.	TOTAL DEATHS.		Deaths under 5 years.
		By Races.	Total.	By Races.	Total.																	By Races.	By Towns.	
Burlington ----- } City Clerk.	White. Colored.	2,500 500	3,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	00 00	0	0
Winston ----- } City Supt. Health.	White. Colored.	4,800 5,200	10,000	10.0 11.5	10.8	-----	-----	-----	-----	-----	-----	1	-----	-----	1	-----	-----	2	-----	-----	1	4 5	9	-----
Durham ----- } Dr. N. M. Johnson.	White. Colored.	4,500 3,500	8,000	8.0 10.3	9.0	-----	-----	-----	-----	-----	-----	2	-----	1	-----	1	-----	1	-----	-----	3 3	6	3	3
Fayetteville ----- } Dr. J. H. Marsh.	White. Colored.	2,800 2,200	5,000	8.4 32.7	19.2	-----	-----	-----	-----	-----	-----	2	1	-----	-----	-----	-----	1	4	-----	2 6	8	1	1
Goldsboro ----- } The Mayor.	White. Colored.	2,800 2,200	5,000	12.8 5.4	9.6	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	1	1	-----	1 1	3	4	2
Henderson ----- } Dr. A. Cheatham.	White. Colored.	2,000 2,256	4,256	12.0	5.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1	-----	2 00	2	-----	-----
Weldon ----- } City Clerk.	White. Colored.	685 750	1,435	52.5 48.0	50.2	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	1	2	-----	3 3	6	3	3
Oxford ----- } Dr. P. Booth.	White. Colored.	1,700 1,000	3,300	28.2 7.5	18.2	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	3	4 1	5	3	3
Raleigh ----- } Dr. Jas. McKee.	White. Colored.	8,000 7,000	15,000	12.0 22.3	16.8	-----	-----	-----	-----	-----	-----	3	1	1	3	-----	-----	2	1	-----	8 13	21	8	8
Salisbury ----- } Dr. J. J. Summerell.	White. Colored.	3,500 2,000	5,500	10.3 6.0	8.7	-----	-----	-----	-----	-----	-----	-----	1	1	-----	-----	-----	-----	1	-----	3 1	4	-----	-----
Tarboro ----- } City Clerk.	White. Colored.	1,000 900	1,900	12.0 40.0	31.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	3	-----	1 4	5	-----	-----
Washington ----- } City Clerk.	White. Colored.	2,800 1,800	3,600	13.3 13.3	13.3	-----	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	2	2 2	4	2	2
Wilmington ----- } Dr. F. W. Potter.	White. Colored.	9,000 12,000	21,000	14.7 23.0	19.4	-----	-----	-----	-----	-----	-----	2	3	1	1	4	2	4	10	-----	11 23	34	8	8
Southport ----- } The Mayor.	White. Colored.	500 500	1,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	00 00	0	-----	-----
Statesville ----- } Dr. M. W. Hill.	White. Colored.	2,000 500	2,500	18.0 24.0	15.2	-----	-----	-----	1	-----	1	-----	-----	-----	-----	1	-----	1	-----	-----	3 1	4	2	2
Wilson ----- } Dr. A. Anderson.	White. Colored.	2,000 1,500	3,500	24.0 64.0	41.1	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	2	-----	-----	4 8	12	4	4
Hillsboro ----- } Dr. D. C. Parris.	White. Colored.	600 400	1,000	60.0	24.0	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	1	-----	-----	00 2	2	-----	-----
Rocky Mount ----- } The Mayor.	White. Colored.	600 400	1,000	40.0 30.0	36.0	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	1	-----	1	2 1	3	-----	-----
Scotland Neck ----- } The Mayor.	White. Colored.	600 400	1,000	20.0 30.0	24.0	-----	-----	-----	-----	-----	-----	1	-----	-----	1	-----	-----	-----	-----	-----	1 1	2	0	0

